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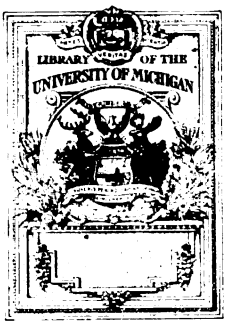

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THE MEDICAL COUNCIL

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J. J. TAYLOR, EDITOR

We find Wisdom and Strength in Council

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THE

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WE live in a wonderful age. There never was a time when more problems were being solved in medical science than today. We are on the eve of very important and even revolutionary achievements. It is only by wide reading and close study that a practicing physician can keep abreast of the rapid progress that is being made.

Clinical Significance of Sore Throat.

The relationship of the throat to several of the common acute infections is recognized, and from time immemorial the mouth has been much explored for new and well-known diagnostic data; but recent research is uniformly conclusive that we do not attach one-quarter enough significance to the possibilities of persistent and thorough inspection of every part of the oral cavity in nearly every new clinical case.

To the average mother, disorder in no other part of the child's anatomy so promptly causes anxiety as in the throat. She immediately consults the family doctor—and a great pity it is she is not able to recognize a larger per cent. of cases first; and those she detects at all, at an earlier period. This is an important field for parental education—and for clinical cultivation by every general practician.

Here are the tonsils, faucial pillars, palate, uvula, pharynx, larynx, etc., structures all particularly exposed to injury and infection, and especially susceptible to the latter. Here is the largest lymphoid body in the pharyngeal lymphatic circle, "the vicious circle of infection," known also as "Waldeyer's ring." The faucial tonsils are the largest lymphoid body in this ill-famed circle, and truly the gateway to every known form of infection whose organism may be borne thither via the atmospheric air or our food.

The mere fact that volumes could be written on the tonsils alone, setting forth their role in many acute and chronic infections, in local and general diseases; in the process of infection, incubation and prolongation of the diseases; and, finally, in the part they should be made to play in diagnosis, treatment and prophylaxis of the same disease—all these and many more kindred subjects to the thinking practician, equally relevant, emphasize the clinical importance of knowing well the homely lymphoids—the tonsils. They

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also, by their very multiplicity and importance, oblige us to confine these remarks mainly to the tonsils and to general statements.

This subject is one of paramount importance, not in danger of too great emphasis. This is abundantly demonstrated by our pioneer men in clinic and laboratory. They find in this field vital factors in the clearing up of old difficulties. A long list of common and uncommon conditions, embracing almost all the diseases known to medicine, have their origin, directly or more or less remotely, in the cryptous tonsils.

The evidence by which so much is laid to the charge of these glands is abundant and convincing, positive and negative.

Frst, consider rheumatism. A long time we puzzled over the possible relation between acute articular rheumatism and tonsillitis. Many believe that rheumatism causes tonsillitis just as it causes cardiac disease, but how and why the former could not be made clear? We now know that in the majority of cases articular rheumatism is caused by septic matter absorbed from diseased tonsils—from well-concealed pus pockets, as a rule. The cases not so originated begin presumably in similar pus conditions that remain yet to be found.

Thus we account for a large disease group: Rheumatism, with its complications and sequelæ, as endocarditis and myocarditis, arteriorclerosis, arthritis, pericarditis, pleurisy, peritonitis, and myositis—so-called muscular rheumatism.

The rationale of tonsilitis, pharyngitis and other allied conditions is easily comprehended when one remembers that the tonsillar crypts are filled with mucin, and the micro-organisms therein protected are permitted to multiply under most favorable conditions.

Another group, and one of even greater significance, is the tuberculous. More than twenty years ago, by the minutest analysis, sixty-nine per cent. of the cases of tuberculosis were pronounced either tonsillar, or having at least a tonsillar complication. The passing years, by overwhelming evidence, prove that this percentage is much too low and that in the majority of instances the tonsils are the seat of the primary infection.

Tonsillar tuberculosis, then, assumes first diagnostic importance. Two forms are recognized—active or clinical, and latent. The latter is not very easily differentiated from simple tonsillar hypertrophy. Clinical and latent tuberculosis are differentiated essentially by the absence of subjective and objective symptoms in the latter, and definite subjective and objective manifestations in the former.

The characteristic appearance of the clinical type is a peculiar pallor with a slightly edematous or weeping surface covered with tenacious, thin, somewhat milky secretion; localized areas of small pin-point or pin-head white or grayish deposits of greater or less extent are seen definitely situated beneath the tonsillar surface. Somewhat later one sees the beginning of ulceration manifesting itself by a superficial excavation, irregular in outline and unattended by inflammatory surrounding redness.

The subjective symptoms are discomfort in the throat followed by pain which becomes excessive and is usually associated with more or less marked constitutional symptoms, such as fever, rapid pulse and loss of weight. It is true that these symptoms, when confined to the tonsils alone, are rarely very marked, but involvement of surrounding pharyngeal tissues takes place so rapidly that the interval between the onset of the tonsillar manifestations and the development of constitutional symptoms is but short.

Another group of diseases originating in this region is the *septic*. Marked and deep ulceration occurs, the ulceration may spread upwards to the naso-pharynx and nose and downward to the epiglottis and larynx; the soft palate may be perforated

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or the uvula may slough off. Or instead chronic septicemia with undermined metabolism and anemia may follow the infection. In these conditions cure follows removal of the tonsils and all treatment is futile without surgical aid.

There are numerous conditions that are materially benefited, if not permanently cured, by removal of the tonsils. Only a few of the leading ones need be here mentioned. It may be inferred from the foregoing that surgical treatment is essential in (1) all conditions that depend for their continuance upon tonsillar irritation or tonsillar-bred septic matter; also (2) that all diseases originating in unsound tonsils. The first group embraces diseases that are local, proximal or constitutional, such as, chronic tonsillitis of whatever nature, this is capital prophylactic treatment for them had diphtheria. It should be an accepted fact that diseased tonsils predispose chronic pharyngitis, tubular catarrh with middle-ear disease, enlarged cervical glands, bronchitis from faucial irritation, Rigg's disease, phlyctenular conjunctivitis, etc.

Acute infectious diseases, such as diphtheria, scarlet fever, etc., have been prevented by a complete enucleation of the tonsils; and when these diseases occurred, they have been of a very mild form. In an endemic of diphtheria at the San Francisco City and County Hospital, twenty nurses contracted the disease; all had diseased tonsils. There were approximately twenty nurses who had tonsils removed; none of individuals to diphtheria, as is practically always the starting point for such infection.

After an attack of diphtheria the child with unhealthy tonsils is most apt to become a "carrier" of the germs. In an Indiana school, after a recent outbreak of this disease, eighty such throats were found among one hundred and forty-nine examined.

Finally, we note the capital fact that removal of tonsils is generally beneficial to the health of the patient. It is a common observation that ninety or ninety-five per cent of the patients gain weight following tonsillar enucleation. This statement holds good in cases of "underweight" in which organic disease can be excluded.

Locomotor Ataxia Is Curable.

This is a startling headline, but none the less the statement of a demonstrable fact. The proof is clinical and abundant. Locomotor ataxia should be classed among the curable diseases for precisely the same reasons that pulmonary tuberculosis is now generally so classed. There are found on every hand persons who are *cured*—who have not shown the characteristic symptoms of *Tabes dorsalis* in the past ten, twenty, or even forty years, or perhaps in the longest period experienced such symptoms only a few times. Such cases are reported by our most acute observers to be numerous and on the increase.

Not that such persons are absolutely free from symptoms common to confirmed tabetics. The fact is they do retain evidences, it may be to a marked degree, of permanent structural lesions, the result of progressive tabes. This we should expect for the same reason that we expect scar tissue always to mark the site of disease in a *cured* case of pulmonary tuberculosis.

For similar reasons tuberculosis and tabes were once invariably placed side by side in the group of incurable diseases. Why now rate the former as curable and not the latter? Why have incurable tabes in our text books and curable tabes in the records of our great general clinics? There has been a large gain in clinical results, merely from the psychical effect in every community where tuberculosis is now generally regarded as a curable disease. Equally good results are bound to follow, in the treatment of diseases of the central nervous system generally, when the diagnosis of tabes ceases to be rated equal to a death warrant.

The classical comprehension of the term tabes is "progressive locomoter ataxia."

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But the progressive case is the exception, while the non-progressive case is the rule, even when the treatment is merely hygienic More and more common in our clinics are mild, benign, abortive and arrested cases. These latter fall to the lot of the general practician, not a few cases being fairly well treated without openly declaring the diagnosis. The progressive cases are found in the clinics of the neurologist. Text-book *locomotor ataxia,* it must be presented, comprehends only the progressive type of the disease.

In a careful analysis of the symptom complex of a case of locomotor ataxia of this progressive type, several, if not many, symptom-origins may be assigned. Among these are: Injured sensori-motor functions, insufficiency of intestinal, pulmonary, and urinary elimination, infection of the cavities, fever, medicinal poisoning, over-work, worry, insomnia, alcohol, over-feeding, etc.

As regards the multiplicity and complexity of the symptoms, a whole lot depends upon whether the patient is or is not being well treated, and whether he is scrupulously obedient to every detail of treatment. Over-treatment may produce more supplemental symptoms than the most notorious neglect of treatment or self-treatment. Merely enforcing good hygienic conditions is invariably superb treatment. That the mass of the text-book treatments are too harsh is now generally conceded.

Between two tabetics—one going on with his usual life, over-worked with moral and material difficulties, sleeplessness, faults of alimentation and hygiene, frequent medical intoxication (morphine, antipyrin, pyramidon, heroin, etc.), resulting from the over-working of an organism whose equilibrium is worn out; the other of the same age, conditions and lesions, who as soon as the diagnosis is settled abandons work, modifies his hygiene from top to bottom, sleeps, eats, does not take exercise or rest but those prescribed—between these two patients no comparison can be made either as to symptom complex or prognosis.

The cry for early diagnosis, so important in tuberculosis, pertains here with no less force. Tabes incipiens, or, better still, tabes taken in its *ante chamber,* is not refractory to treatment. Long ago locomotor ataxia began to be looked upon as a misnomer—merely the name of the most prominent late symptom. Sclerosis in the posterior columns of the cord was found causative of the ataxia. Now recent investigations tend to show that tabes is not passive necrobiosis of the sensory neurone in the posterior columns. The death of the posterior column fibers is secondary to an inflammation of the posterior root with which they are continuous.

Time Element in Stomach Digestion.

Attention to the diagnostic and therapeutic importance of the difference in the time required for the stomach to empty itself with excessive motility, pyloric insufficiency or stensois and atony, according as the individual lies on his right side or on his left side, has recently been directed by German investigators. They found, however, that the best results are obtained when the individual is examined with the x-ray in various attitudes.

Their research on healthy persons and on others with various gastric affections showed that the stomach emptied itself in from 2½ to 4½ hours as the person lay on the right side; lying on the left side, from 5 to 8 hours were required even in health. When the difference is unusually great, the stomach emptying itself very rapidly as the patient lies on the right side, there is generally pyloric insufficiency. On the other hand, when the difference is unusually small, owing to the more rapid evacuation as the patient lies on the left side, hypermotility may be assumed. With motor insufficiency from atony there is long delay before the evacuation when the person lies on the left side. With beginning pyloric stenosis the difference is slight, as the motor functioning is rather increased than diminished, and thus, even reclining on the left side, the stomach content is forced to the pylorus much more readily and under higher pressure than in case of atony; the resistance of the pylorus is the same whether the individual lies on the right or left side. In case of gastric cancer the stomach did not empty itself until after 5 hours on the right side and after 7 hours on the left, and the course of the case confirmed the assumption of cancerous stenosis.

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Souvenir of the Old Family Doctor's Outfit.

In diseases of the chest, such as heavy colds, congestion, bronchitis, pneumonia, pleurisy or what not—particularly in children or young people—the *old family doctor* was wont to resort to local treatment that should be every whit as good to-day as it was then. Its value nobody disputed then and nobody would presume to dispute to-day.

The old doctor was not much at thumping the chest, but he had overwhelming sympathy for the sick and knew his patients as a professor knows his book. Best of all, he placed every emphasis on treatment. "Soreness on the chest," "a painful dry cough"—that's enough, to him, for the best he has in the way of treatment. If there is fever it's "breast fever." Never mind fine shading in diagnosis. He was called to treat and to cure, that's his policy.

We give below the recipe of "an old family doctor's" ointment, long employed locally in colds of the nose, throat or chest—give it as a *souvenir* of practice fifty years ago, merely because of its great age. Here it is:

℞ Mutton suet.
Lard, āā 1 teacup.
Gum camphor, ¼ to ½ oz.
Spts. turpentine.
Aq. ammonia, mild, āā 3 tablespoonfuls.
Oil nutmeg, 1 tablespoonful.

The latter may be omitted. Some prefered to add, also, two ounces of onion extract. The above ingredients were mixed thus:

Put tallow and lard on stove until hot. Add camphor gum; when dissolved, take from stove and let cool a little, then add the rest of ingredients, and beat until cold, and put in jars or tins with lids on.

Sig.—Hold in hand till warm, or apply with warmed hands, rubbing in well over bridge of nose, the neck, or the chest. Where convenient cover with old flannel.

We venture the surmise that, if by the movement of some magic wand, this ointment could have its age transmitted to crisp novelty and its old style vestments to the modern cut of an elegant specialty many would rise up and call us blessed.

Doctor, we are giving as good a medical journal as we are capable of doing. If you have not yet sent in your renewal money, please make it as easy as possible for us with the postal department by sending it right away. You may as well do it now as any time—and it makes a VERY GREAT DEAL OF DIFFERENCE to us. Remember the motto of success: "Do it now."

It is important that any subscriber who changes his location should at once notify us of his change, giving his old address also, so as not to miss any numbers of THE COUNCIL.

Paragraphs: Therapeutic and Dietetic.

TREATMENT WITH STOMACHICS.—There is no field of medicine in which greater practical activity has been displayed in recent years than in the physiology of digestion. New methods, new results and new facts are in evidence. Incidentally, many old remedies, standards of a century past or more, and old clinical practices in dietetics have come under the strong light of scientific criticism to gain a place in rational therapy or be for a time rejected. Hence the gist of these notes. One of these facts, or group of remedies, is the simple bitter tonics, long supposed to act directly upon the gastric mucosa, but now known to act indirectly through the gustatory nerves—to be no more active than so much water if the *bitter* is not tasted. This rules out pills and tablets, favors the old-time *infusion*, and is preferably given five or ten minutes before meals.

DIGESTIBILITY OF EGGS.—Upon the basis that the time required by a food to pass through a normally functioning stomach is a correct measure of its digestibility or, more particularly, its value to an invalid, German investigators place the several preparations of eggs in the following order: lightly cooked eggs, raw eggs, buttered eggs, hard boiled eggs and omelette. The nitrogen of hard boiled eggs stands on a par with that of lean beef, but with respect to the fat that of eggs ranks above that of beef. Others have ascertained that raw and soft boiled eggs have a higher food value, when a mixed diet is allowable, than a corresponding amount of meat. Of course this can apply only to stomach digestion, but it has large clinical value, particularly in the treatment of all intestinal diseases.

DIGESTIBILITY OF FARINACEOUS FOODS.—Such have clinical significance of greatest import in the diet treatment of diarrheal diseases. They must be eschewed completely for a season, then resumed in the order of their adaptability with regard to the amount of work their ingestion is likely to throw upon the intestines. According to German investigators the following is the order of merit of suitable articles of diet: finest wheat flour, finest corn meal, rice meal, arrowroot, zwieback (toast), sago, vermicelli, rice, white bread, and potato "brei." All must be well cooked to break up the grains, and it is often an advantage to have them malted or dextrinized.

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RATIONAL USE OF CALCIUM.—Coagulation of the blood is dependent on a normal calcium content of the blood. Under certain pathological conditions the absorption of calcium from the food is accomplished with difficulty or not at all. And in such cases the same applies to calcium administered in treatment—a clinical fact long recognized but now overcome by giving the salt, preferably the lactate, hypodermically. A solution of the strength of one to twenty is favored. At the same time calcium chloride may be applied locally to the wound. Treatment must be persistent. But with all this certain cases, pronounced hemophiliacs will fail to respond to calcium treatment. Still, until the treatment has been given a most thorough trial one is not justified in trying another of the many remedies of more or less repute, such as: diphtheria antitoxic serum, gelatin, adrenalin, ergotin, ovarian and thyroid extract. Although calcium salts will diminish the clotting time of the blood in hemophiliacs as well as in normal persons, it sometimes gives negative results in the treatment of hemophilia.

HYPERTONIC SALINE SOLUTIONS.—In extreme loss of blood, or lost equilibrium from extreme draining away of the serum of the blood, or in kindred conditions of collapse, resort to strong cardiac stimulants, such as strychnine, digitalis, spartein, camphor, etc., does no good because the heart has nothing to act on. There must be sufficient fluid in order that the heart may carry on its functions. The proper treatment is normal salt solution administered intravenously. If for any reason this cannot be given at once, the first alternative is salt solution subcutaneously or, better still, intraperitoneally. Finally, when facilities are not at hand for any of the above, rather than expose the patient farther to risks, enemata of salt solution should be given—two litres every six or eight hours. So long as nausea can be controlled there is advantage in copious draughts of water. In employing the hypertonic solution intravenously our sole guide as to quantity is the effect of the solution on the patient. This is generally phenomenal. After the normal quantity has been passed the excess tends to provoke diarrhea. Additional stimulation, after a liberal use of salt solution, is sometimes necessary, and must be resorted to.

MASSAGE TREATMENT OF CONSTIPATION. Undoubtedly in the past the general practician has placed too much reliance on cathartic drugs and too little on manual therapetics in treating chronic constipation. In the latter, five movements are recognized: Friction, rolling, compression, kneading and percussion. In treating the abdominal organs, including the nerves, lymph-spaces, juice-canals, blood-vessels of all kinds, as well as the accumulations which exist, any or, better, all of these movements should be combined, although the last two named are of doubtful utility. The main points to keep in the foreground are firmness combined with gentleness; persistence; the slow breaking up and displacement of any retained feces wherever found, and the compression of every gland concerned with the process of digestion and assimilation. The first treatment must be gentle, otherwise soreness may provoke the patient to rebel.

"Burns Rapidly;" Forearmed.

The British Fire Prevention Committee, in a recent report, seeks the most speedy and effective methods to call the attention of mothers to the dangers connected with the use of such fabrics as flannelette, an artificial flannel that is much used in the making of children's night dresses. In our country the fabric, made of cotton and fleecy on one side, is best known as *outing flannel*. No more inflammable material is used perhaps in the fabrication of sleeping garments and coverings than this flannelette, and some of the awful fires ending in the destruction of child life can be attributed to the wearing of this fabric.

The committee recommends that manufacturers be required to work into the selvedge of all flannelettes the words of warning, "Burns rapidly," and calls upon physicians and all others in an opportune position to warn mothers of this danger.

The danger lies in the *fleece* on one side of this popular cotton, or artificial flannel. Nobody would dare presume to counsel the disuse of this economic fabric. It is too valuable and too well fills the needs for a soft warm fabric to throw away. On the other hand, natural wool flannel is too costly to use instead of the artificial product for many people.

As in the case of celluloid, gasoline, kerosene, furniture cleaner and allied preparations, and other general utilities that burn almost like powder, we are in a position merely to warn against careless usage or storage.

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Original Articles

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Sentences, like sunbeams, burn deepest when most condensed.

Paresis.

By G. Wilse Robinson, M.D.,
Kansas City, Mo.

This condition is characterized anatomically by a progressive degeneration which finally involves all of the nervous system, and by a progressive decadence of all of the nervous functions—the psychic, sensomotor and trophic.

Symptomatology.

Great difficulty is frequently experienced in the early stages, in diagnosing the condition, because of the variability of onset and the multiplicity of symptoms which occur in some of the cases.

Paretics should be diagnosed early. This should be done for several reasons. Their conduct toward society, their family, and their business is so anomalous as to endanger them and their family to social and financial ruin. Having previously been a conservative business man the paretic may ruin himself and others who have trusted him—by the most unwise and ridiculous speculation; and having previously been a man of good moral habits, he may suddenly become a most shameless libertine. And, too, if paresis is to be checked in its onset, it must be done in the very early stages.

There are four distinct modes of onset of dementia paralytica. They are:

First, that group of cases in which there is marked exaltation of the various psychic activities. This is the most common type of paretic. Such patients have delusions of great wealth, great physical strength, and very superior wisdom and knowledge. They begin exaggerating in many ways in their statements; they spend money more lavishly than formerly; they become more active, more enterprising and restless. Their possessions increase wondrously until they finally own the entire earth and all the stars in the heavens. They often pose as the creators of everything. They are irritable and intolerant of opposition.

The second type of paresis is marked by a progressive depression of all the mental faculties. Patients affected with this form of paresis become dull and apathetic. There is marked loss of memory. There may be for several years apparently a condition of hypochondriacal neurasthenia, which is finally diagnosed as paresis after the condition has more fully developed. The somatic symptoms, if observed very closely, will prevent the clinician from being led astray by the paradoxical psychic symptoms.

In the third group of paretics, the somatic symptoms are more prominent than the psychic symptoms. The patient observes disturbances of sensation, but the most constant and characteristic symptom is the disturbance or perversion of expression of thought, either by speech or writing. The paretic speech is described as drawling, stammering, hesitating, scanning, spasmodic, ataxic, etc. The disorders of speech may be the first symptoms manifested. The writing, too, is slower, uncertain and unequal.

Other somatic disorders observed are tremors, disorders of innervation of the pupils, exaggeration or abolition of the reflexes, and disturbances of sensibility. Even in this form of onset there is early a slowness of psychic processes and a depressed mental state. Accompanying these symptoms there is a ready distraction, listlessness, negligence, low spirits, and affective irritability. Sexual disorders, impotence and sexual obsessions are of frequent occurrence.

In the fourth group of paretics the patient has always enjoyed good health. They may have some vertigo, headaches, confusion, etc., but nothing to cause any alarm or even to cause many to consult a physician. The first striking symptom is a sudden epileptiform of apoplectiform attack. This is usually repeated after the lapse of some months. Paresis may begin as an acute lypemania, or with delirium of persecution or of grandeur.

In all forms of onset, the two most characteristic symptoms are dementia and delirium. The dementia is present from the initiation of the disease. The deliria are of grandeur, persecution or a hypochondria.

The character assumed by the disease in its later manifestations is determined largely by the organic constitution of the individual, the individual tendencies and the degree of culture previously attained by the patient. There are certain characteristics assumed by the disease, though, which are of a con-

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stant nature in the stage of complete development. The most constant and the one essential symptom is a gradual or rapid decadence of all of the cerebral functions. Dementia and delirium are the most frequent symptoms. The dementia is constant, the delirium is variable. The dementia is not secondary, but is present from the first and can be demonstrated by a careful examination. The set expression, relaxed features, the lifeless look, the mental slowness, the incoherent instability, the decreased power of attention, the variable degrees of lapses of memory, the errors of judgment, the exaggerated sense of well-being without the proportionate readiness of the psychic processes of the maniacal—all point to the mental decadence.

Delirium is of grandeur, of persecution, sensory delirium.

Sentiments are altered, emotions are depressed.

Somatic Phenomena.

Tremor, accompanying voluntary movements of face, hands and tongue; oscilations are slow and unequal. Effort increases and exaggerates the tremor and the will is incapable of restraining it. Deglutition is disturbed; sensibility decreased; pupils irregular, unequal in some, react to light and accommodation in some, while in others they may not to either; consensual reflex usually absent. The visual acuity reduced, visual field restricted, optic paralyses present frequently.

Tendon reflexes, are exaggerated, absent or unchanged.

Temperature varies.

Pathological Anatomy.

Localized degenerative process, according to some an inflammatory process. It is usually a combination of the two. Cranial bones congested and thickened; dura thickened, turbid and adherent. Blood or serum in sub-dural spaces. Arachnoid is thickened and always infiltrated with serum. Meshes of pia-mater are dilated by an infiltration of fluid; the pia is thickened, opaque, hyperemic. The cerebrum is congested and marbled with vessels, sometimes ulcerated. The convolutions are smaller, the gray substance smaller, the white substance harder. The ependyma of the ventricles is thickened and graunlated. The ventricles are dilated and filled with fluid. The vessels are distended and full of blood; they are sclerosed, hard and deformed, showing various kinds of degeneration, colloid, hyaline, waxy, fatty, atheromatous, and the walls may be incrusted with lime salts. The perivascular spaces are dilated and filled with fluid. The hyperplasia of the interstitial tissue generally commences in the deepest layers of the gray substance, thence spreading to the others. Nuclei and spider cells are found in great abundance. Spider cells are most numerous in the frontal lobes, and they are increased to three or four times their normal size. Plasma cells, described more recently by Unna, Marschalko and Vogt, are regarded by Vogt as being pathognomonic of paresis. They have very peculiar pathognomonic morphological characteristics—eccentric position of the nucleus, peripheral distribution of the protoplasm, and a clear zone in the centre of the cell-body. They are found in very large numbers around the blood vessels, especially in the lymphatic spaces and adventitial spaces. They are much more plentiful in the anterior part of the brain than in the occipital region.

The nerve elements undergo a series of alterations. At first the contour of the cell is more irregular and less clearly defined; the protoplasm becomes swollen, edematous and turbid, and afterwards undergoes atrophy and degeneration, varying in degree and kind—fatty, pigmentary, fatty-granular, hyaline. The nuclei are no longer round, but irregular, enlarged and lose their contour; the nucleoli also disappear, and at the same time the protoplasm seems to be atrophied and contains vacuoles. The cell protoplasm breaks up and frequently nothing but detritus is left.

The cell processes change. Dentrites are retracted.

Spinal cord alterations: (Burdach) Pyramidal tracts, degeneration may be diffuse or in islands.

Denegerative processes are present in other organs and tissues and in vessels.

Etiology.

Fournier at first regarded paresis as being syphilitic in origin and later of parasyphilitic nature. Recent statistics show an extremely varying percentage of the syphilitic origin of paresis, varying from 11 to 94 per cent. Syphilis is certainly a very potent factor in the causation of paresis, but the fact that there is no paresis among the Mohammedans, and syphilis abounds, is very good evidence that uncomplicated syphilis does not cause paresis. The Mohammedans do not use alcohol, and some have reasoned that syphilis will not cause

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the disease, but syphilis plus alcohol will cause it.

Syphilis acting on a nervous system impaired by heredity or alcoholism, or any wasting and exhausting diseases, or a combination of one or more of the above named causes (and there are usually combinations) may cause this condition. I do not believe the dictum: No syphilis no paresis. Lewin reports 20,000 cases of syphilis without one case of paresis, although one per cent. of them became insane. There is no difference in the clinical sense between the syphilitic and the alcoholic and other non-syphilitic paretics.

Prognosis.

The course of paresis is from a few months to ten years or more. Disease may be shortened by acute delirium, apoplectiform and epileptiform attacks.

In the early stages, there is no difference in the clinical symptoms between paresis and brain syphilis. The symptoms of both conditions are much similar to those found in neurasthenia. An examination of the spinal fluid in either condition shows an increased number of lymphocytes present. The Wasserman and Noguchi tests are positive in both conditions. Drs. Rosanoff and Kaplin assert that these reactions are not positive unless the syphilitic virus be active or potentially active. It would seem, then, that in the early stages, paresis is caused by the virus of syphilis. In the later stages the symptoms are the result of secondary degenerations. If these assumptions are true—and they have been demonstrated—then if paresis be recognized early and active anti-syphilitic treatment be instituted, in many of the cases the process can be checked before irreparable damage be done to the nerve elements. Treatment of any sort will not avail to replace the degenerated neurones. It is a matter of the greatest importance that, in pseudo-paresis or in true paresis, anti-syphilitic treatment be tested thoroughly in the very early stages. Mercurial treatment is the treatment that should be given in the early stages. If treated early, prognosis is good in many of the cases, but if treatment is delayed until degenerations occur, the prognosis is bad.

Doctor, you don't want us to feel uncertain about your renewal, do you? Send it in right away and get it off your mind.

A Plea for Medical Gynecology.

By F. R. Burdeno, M. D., Garrett, Ind.

It is not my purpose here to antagonize my surgical brothers, but we all too often see brilliant descriptions of hair-raising gynecologic operations having been performed, with a wonderful survival of the patient. It is no doubt a great credit to the medical profession to have produced men with such wonderful technique and extraordinary skill as to enter one's very vitals and remove the most delicate organs that we were able to conceive of. Surely we cannot bestow praise enough upon men with such marvelous accomplishments. But did you ever stop to think that there might be a patient now and then who, under skilled medical directions, might have avoided such hazardous procedure and still have been cured?

We must agree that it is far better to spare a thousand guilty than to hang one innocent one. I believe that, were we to use the same sound reasoning in our professional affairs as we do in the affairs of the state, at least some of our patients would escape the necessity for an operation. I do not mean to infer that all cases can be treated without the surgeon, but I do mean to say that a very large majority of our female pelvic affections can be so treated as to give the most startling results to both patient and physician. Not more than fifty years ago all these pelvic troubles were treated by the family physician that made our ancestors famous. It does not seem reasonable in cases of acute inflammation of even in the chronic variety to remove the offending organ.

When we have a case of pericarditis or a case of pneumonia, were we to pursue the same course as we do with the pelvic organs what would become of our patients? Now, were we to treat our pelvic afflictions as we do our thoracic affections there is no doubt that our hospitals to-day would be less crowded and more of our women would be restored to health by less violent means.

Now, as to the medical treatment of the ordinary maladies of the female pelvic organs, I simply want to say a word in passing, and that is for the defense of the much used and very much abused treatment, the vaginal douche. I believe that more than half of the pelvic cases presenting them-

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selves at our offices are due partially, if not entirely, to the improper use of that procedure.

There are two chief uses of the vaginal douche to be commended, namely, cleansing and depletion. One caution I wish to draw your attention to is, to never hang the douche bag over gas fixtures, picture mouldings or the top of the bed. Also, under no condition should the bottom or lowest portion of the douche bag be more than two feet above the pelvis. To relieve inflammation, the water should be used as hot as the patient can stand and allowed to flow slowly in and out of the vaginal canal, the water, of course, being sterile, or an antiseptic may be added, as is deemed best.

The principal end to be obtained by a douche is one of depletion. (The depleting effect of hot water is seen markedly on a woman's hands after washing.) With this, of course, it is necessary to keep the functions of the other organs active, and a general tonic treatment should be carried out, and rest be obtained. The hygienic treatment is one to which too much attention cannot be given.

If we carry out this line of treatment and wait with a little patience, our patients on a whole will make a satisfactory recovery. I do not wish to be understood as one who condemns surgery, for there is no one who more readily secures the services of a surgeon in indicated cases after the medical treatment has been tried fairly with no prospect of success.

I wish to call your attention to the fact that a large majority of our female cadavers are found with cystic ovaries, which in life had given no trouble whatever. Were we to discover cystic degeneration of an ovary or a tube, our first thought would be to secure the services of a surgeon.

I myself had a case of an ovarian cyst in a young married woman. She had been suffering for years with pelvic troubles—a pain in the left sacral region. On December 2, 1907, I was called to her residence. On arriving I found her suffering with excruciating pain. She had some temperature and was very much constipated. Some three years before she was stricken with peritonitis. At my third visit, on examination I discovered an ovarian cyst about the size of a goose egg. Being eager to remove this cyst I kept after her some time to be operated on. Finally she consented to the operation; on March 12, 1908, I secured a surgeon, removed the cyst, which weighed, including the ovary, nine ounces. She survived nicely from the effects of the operation, but the removal of the cyst itself had no effect whatever on the woman's ailments. While I believe her ailments were partially due to the cyst, I firmly believe the main cause of the trouble was due to the adhesions caused by peritonitis which she had some years ago; so you can readily see that this is one of the many cases where a woman was unnecessarily subjected to the hazardous treatment, excruciating pain and a big expense without recovering one penny's worth of good. I firmly believe that these cases should be permitted to go on unless urgent symptoms develop, forcing us to use other methods. As I have said before, it is not my purpose to antagonize the surgeon, but to point out and impress upon the mind of the general practician that he may, with the same skilled use of his medical art as the surgeon displays with his knife, cure a large percentage of his gynecologic cases and relieve suffering humanity with less violent means.

Three Strange Coroner's Cases.

By G. Henri Bogart, M.D.,
Brookville, Ind.

I. In February, 1893, I was called, one Sunday morning, to the residence rooms above the public reading rooms, as the custodian, a widow of 60, had been found dead in bed. She had helped the ladies of the committee with a social the previous evening, and had seemed in excellent health at midnight, and as there was no history of anything, save a chronic indigestion of several years' duration, I ordered an autopsy and called Drs. E. L. Patterson and George E. Squier to perform the work.

Death had resulted from a rupture of the the heart, the rent having torn the entire length of the left ventricle. The heart was of a bluish color and so friable that sections of the tissue broke down into a soft pulp between the fingers; it had more the appearance and feel of splenic tissue than any other normal part of the body. We also found the stomach immensely hypertrophied, so much so that the organ covered the entire abdomen, when unrolled, and the function of the organ had been performed by a fold, closed off by an adhesion. The gall bladder was solidly filled by four calculi, which had worn away on the adjacent

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ends, so that the concentric rings made themselves apparent.

II. A couple of months later, Dr. I. D. Garrigues and I were at the village of Southgate, when a man came running and told me that it was lucky that I was in town, as they had just found the old tailor dead in bed. We were without instruments and, after finding that there was no history to account for the death, I went to the shoe shop and bought a couple of shoe knives, with which we made an autopsy.

We found almost exactly the same conditions of the heart as in the previous case, the other organs apparently as perfectly normal as possible for so old a man, he being nearly eighty years of age.

There was no record of any ill health or of any disturbance of function. This patient was tall and slender, a typical "Lean and slippered pantaloon," while the first case was that of a plump, short woman, with abundance of fat.

III. Then, in June of the same year, I was summoned to the south part of the county to hold an inquest over a woman who, while conversing with her husband and some neighbors, had sunk down dead. This woman was quarter blood Indian, was sixty-seven years old, had a reputation for never having known a day's sickness, and was a notable worker, even assisting her husband in the fields. From the general information at hand, I determined that the only means of arriving at the cause of death lay in a postmortem, and I called in my old colleague, Dr. T. F. Bertenshaw, of Drewersburg, Ind., and the same Dr. Garrigues, he being in the vicinity, and we found the same ruptured heart, and the same physical degeneration of the organ as in the other two cases.

In all these cases I returned a verdict of "Parenchymatous degeneration of the heart."

I do not know what it was, and I have never been able to find anything to shed light on the subject, nor have I seen anything similar since. At that time I had become dissatisfied with what I knew about medicine and was just starting a course of general study, which has never known any stopping place since. I did not have a compound microscope—and would not have known much about it had I had one—and the only examination which I made of the tissues was a gross general one. My knowledge of histology was about measured by the opening chapters of my Gray's Anatomy. I cannot conceive how so many physicians still cling to the work which they got in the schools of a third of a century ago. I will venture the assertion that the larger number of the practicians of to-day do not have a good microscope, and even though they did have one they would not know how to use it successfully. At the time I was new to the coroner's office, and as we have a statute in this state which makes the carrying away of a specimen from an autopsy a felony, I did not preserve any specimens. I learned differently in my fourteen years' service in the office.

Now, I have feared to report these cases for years, lest they should be considered figments of the imagination. However, the evidence of each case was embodied into affidavits, which became part of the records of the circuit court at Brookville, Ind., and which are now on file with the archives of the county clerk. Drs. Patterson, Garrigues, and Squier are living and practicing here in Brookville, the first named being the retiring state senator of this district, and Dr. Bertenshaw is still practicing at Drewersburg, so that with this official endorsement of the cases, I have concluded to risk my reputation for veracity, and appeal to the profession to tell me what I found and what was the cause.

I observe that I have omitted one feature of these cases, viz.: that, on breaking down the tissues between the thumb and finger, there was a sensation as though the pulped muscle was finely granular.

In this relation I wish to state that I have never used gloves in post-mortem work, relying largely on the sense of touch.

PHYSIOLOGIC DEFENSE. — If we are simply appalled by the bacterial find in milk that is more or less off, what about a most ordinary average of 200,000,000 putrefactive bacteria per gramme in meat not exactly fresh nor yet too stale to reject? Fortunately the normal defenses of the body render this terrible risk comparatively nil. These defenses are the H Cl of the gastric juice, normal digestion first and last, the mucus protecting the lining membranes of the canal, the liver and the thyroid gland and perhaps other antitoxic glands. When, however, hypochlorhydria is present, or the colon is catarrhal, or the liver, the thyroid and other glands are defective in activity, the toxins are admitted into the blood and exert their malign influence on the body.

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Leprosy.

By Heneage Gibbes, M.D., C.M., L.R.C.P. (Lond.).
McAlester, Okla.

Leprosy, while being one of the most loathsome diseases, is at the same time a very interesting one. It has existed from the remotest times of which we have any history, and was probably then endemic in Egypt, as we find that country spoken of by early writers as the home of the disease. In India and China it appears to be almost as ancient, while in Japan it is chronicled in the thirteenth century B. C.

The appearance of leprosy in Europe cannot be determined with certainty, but we must infer from the passage of laws regulating the marriage of lepers, and the foundation of houses for their reception between the eleventh and thirteenth centuries, that the disease had then become widespread.

It has been contended by many writers that leprosy was brought from the East by returning Crusaders, but we must bear in mind that the term then evidently included syphilis and chronic skin diseases. There is little doubt, however, that leprosy was an endemic disease in Europe during the middle ages, and it seems to have gradually disappeared until now, when Norway is the only country in Europe where it is still common.

In early times chronic skin diseases were no doubt included under the head of leprosy, and the passage in the Bible, "a leper as white as snow," has tended to foster this idea, but that disease was in reality of an entirely different character, leukoderma. At the present time the geographical distribution of leprosy to a certain extent confirms the ancient records. In Egypt the disease is still endemic; in western Africa it exists, not only on the coast, but in the interior, and extends to the Cape of Good Hope, where leper asylums have been established for more than fifty years. The continent of Asia is also now one of the headquarters of leprosy; from there it is found as a continuous chain through the numerous islands to the east coast of China. There it is very common, more particularly round about Canton and the southern portion of the empire. It is rarely seen north of the Yang-tse river. Further east we find Japan with an almost universal distribution of the disease.

Of all the countries the province of Qwang-Tung, of which the city of Canton is the capital, is the place where the disease is mostly in evidence to the traveler. In southern China there are no roads, and all the traffic is by water; there are consequently no horses or wagons, and everything is carried by the Chinese coolie, or by boat, for any distance. The country is a complete network of rivers and canals, and as two large rivers almost meet at one place some distance from Canton, and a canal has been cut joining the two, the immense volume of water in the Si-Kong, or west river, is made to furnish water for this great system of canals.

Probably one half of the population of Canton live in boats; these are moored along the river banks and up every little creek and inlet. As you pass along the canals in a Chinese passenger boat, a little canoe comes alongside from some small collection of boats moored in an inlet or the mouth of a small creek, and a man holds up a small bag at the end of a long bamboo to receive a few cash, (cash are Chinese coins about a thousand of which go to a dollar). There seems to be some moral obligation to assist these poor wretches, as I never saw them sent away empty handed. The man or woman paddling the canoe is not far advanced in the disease, but another is generally taken along to excite pity and this one is a horrible object, with face misshapen by tuberosities, fingers and toes gone and sometimes minus one or both eyes.

Lepers are met in the bazaars and even in the streets of Canton, begging from door to door. There seems to be little fear of the disease among the Chinese as far as any contact of this kind is concerned, but they will not work with a leper who has marked external evidences of the disease.

All authorities, I believe, agree that leprosy is prevalent throughout the Japanese Empire. I was in that country several times before it became revolutionized and I never saw lepers in the streets as I did in China; this may have been owing to the fact that we did not walk about much in those days, as life was not very safe.

The Japanese suffer from skin diseases and may be seen in the streets literally covered with eczema. Itch is also common and it has often seemed strange to me that a people who are amongst the cleanest on earth and live temperate, outdoor lives, should suffer from diseases we are in the

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habit of associating with filth and bad hygiene.

Pathology.

Leprosy is caused by the growth and multiplication in the tisues of a micro-organism, the bacillus lepra, and the disease is the result of the chronic irritations produced by the slow, steady increase of this bacillus in different parts of the body.

In the animal body nature provides that, in every case where a foreign substance is imbeded in it that is of such a nature that it does not set up acute inflammation, the chronic irritation which must ensue, causes the adjacent fibrous connective tissue to increase and grow around the foreign substance and if possible isolate it from the surrounding healthy tissue, so that, in the course of time, a capsule of fibrous tissue is formed, having its own blood supply, and the foreign substance is effectually shut off from the rest of the part or organ. It is in this way that nature acts towards every foreign substance, whether it be a pistol bullet or a syphilitic lesion, provided, always that there be nothing to cause acute reaction of the living tissue—if this is the case it becomes one of inflammation and an abscess is formed.

Taking syphilis as an illustration, this disease produces a growth of alien tissues in the part affected; this replaces the normal tissue, which is destroyed, and the function of the part is interfered with or destroyed. The growth of this alien tissue can be stopped and the tissue itself rendered inert or dead by suitable treatment. As soon as this is done the alien syphilitic tissue becomes a foreign substance, the surrounding fibrous tissue grows around it and, after a time completely isolates it from the healthy tissues. Normal tissue, for which an alien tissue has been substituted, can never be regenerated.

When fibrous tissue is formed by abnormal influence, it always contracts, as is so often seen in extensive burns. The capsule which is formed around the dead syphilitic tissue steadily contracts until little is left but the capsule itself.

I have described the process at length, as the same thing goes on in leprosy—nature is always trying to isolate the bacilli in consequence of the chronic irritation they set up.

Unfortunately, they increase too fast for this to be accomplished entirely. The area invaded by the bacilli is, however, completely altered in structure by the abnormal growth of the fibrous tissue and the increase of the organisms themselves, and a nodule is produced which, if near the surface, projects as a hard, rounded elevation. The structure of these nodules is entirely different from that of the surrounding tissue, and a significant fact is that the normal tissues adjacent are entirely unaltered. This is well shown in Photograph No. 1, which shows the normal striped muscle of the tongue, in the immediate vicinity of a leprous nodule, entirely unaltered. It is difficult to believe, in the face of this, that the bacillus of leprosy possesses any toxic properties.

The action of the bacilli is well shown in the liver, which, if the subject dies of some intercurrent disease before the leprosy has become too far advanced, is only slightly affected. Here the initial process may be studied and the formation of new fibrous tissues seen at its very commencement, together with the two or three bacilli that are causing it.

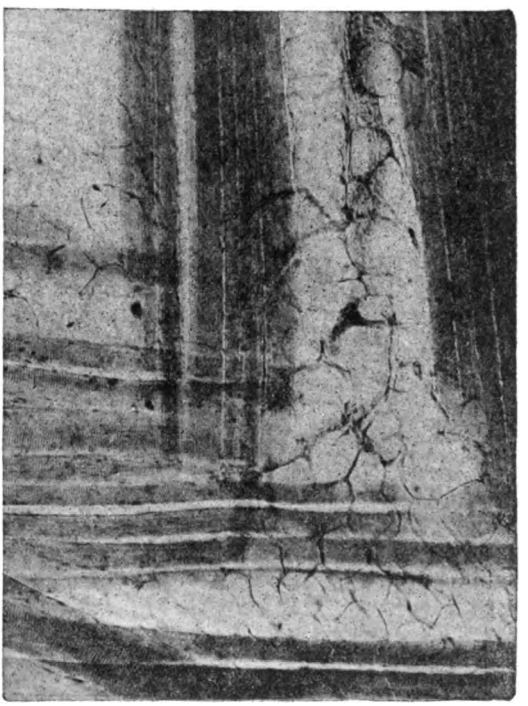

Fig. 1.—Intrinsic Muscle of Tongue of a Leper. In close contiguity to a leprous nodule.

On examining a leper where the disease has not advanced too far, it will be found that there are open sores in different parts, the lobes of the ears, the fingers, etc. These are produced in this way: the bacilli go on steadily increasing until the whole tuberous nodule, formed by their chronic irritation,

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is full of them and the reaction they cause is sufficient to set up acute inflammation, resulting in an abscess, which breaks on the surface and becomes an open sore.

Leprosy is generally spoken of as being of two kinds and by some as three. They are tuberous and anesthetic. When they occur together they form the third class, mixed. The photographs show the distribution of the bacilli in them. All the black spots are bacilli in groups or singly. The parts shown are the skin, the tongue and the lobe of the ear. The specimens from which the photograph were made were stained only to show the bacilli, which are bright red, showing black in the photograph, The tissue of the part is only faintly shown. These masses containing bacilli are leprous nodules, and when they occur near the surface they constitute the tuberous variety. In the anesthetic form different parts of the body lose their sense of feeling and lepers are frequently burned from putting their hands into boiling water when they could not feel the heat. The production of this variety is very simple. The process is well shown in Photograph No. 2. Here a large nerve trunk is seen in the midst of a patch of leprous tissues. The bacilli have caused the formation of these nodules and have penetrated into the nerve trunk which had become involved in the leprous growth and have set up an irritation in it which has resulted in the destruction of the nerve fiber and their power of conductivity has been cut off; consequently that part of the body from which sensation was carried by this nerve has lost its sense of feeling and has become anesthetic.

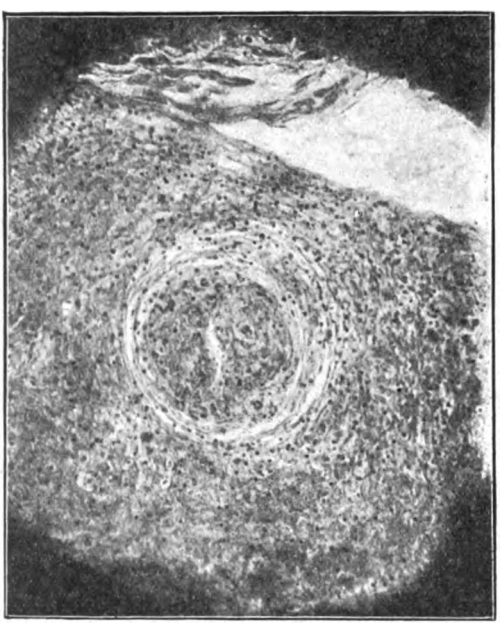

Fig. 2.—Section Through Leprosy Nodule. Magnification X 300.

In this section there was a nerve trunk and it was cut transversely. It will be seen that the nerve fibres have been destroyed and replaced by leprosy tissue and consequently the part supplied by the nerve is anesthetized. Any part from which nutrition and sensation are cut off becomes anesthetic and there is no such thing as anesthetic leprosy as a separate disease.

It will be obvious to any one that these two forms, tuberous and anesthetic, must occur together, one or the other, being more prominent, has given the nomenclatures.

One terrible feature of this disease is the loss of fingers and toes, by gangrene. The manner in which this is brought about is similar to that destroying the nerves and producing anestheisa. Photograph No. 3 shows the process, a blood vessel surrounded by leprous tissues. It will be seen that the lumen of the vessel (the section is slightly oblique) is filled with a tissue similar to that in the leprous nodule surrounding it. It is, in fact, blocked up by it, and consequently the part of the body to which it should carry blood for nourishment is deprived of its nutriment and dies. It is by this process the gangrene is produced which results in the loss of fingers and toes. A leper in this state is a most pitiable object, especially with his face deformed by tuberosities and often one or both eyes destroyed.

I have examined all the organs and tissues of the body in several cases where I was able to make a post-mortem examination, and I have tuberous nodules from the skin of living lepers. In all I have found the same process going on—a reaction of living tissues to a chronic irritation.

This is the one illustration of a terrible disease produced by a bacillus in a purely mechanical manner; and yet some recent writers cannot accept the bacillus as the cause of the disease, because it has never been cultivated outside of the body or communicated to any of the lower animals by inoculation. Several men have reported at different times their success in cultivating this bacillus, but they have never had their results confirmed.

In 1883 I was called to see a case of leprosy in consultation—a youth from Barbedoes suffering from the disease in its earlier stages. He had small nodules on

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his arms and legs. I removed some of these and found the conditions I have described. In this case I endeavored to obtain cultures from the blood and from the living tissue, but without any result. This case was living in an ordinary lodging house (rooming) without any special precautions.

As in this case I have never been able to find the bacilli in the blood. They may occur in the latest stages, but this is very significant when considered with the localization of the disease as it is found in cases not so very far advanced. I also made a careful microscopic examination of some lumbricoid worms, *ascaris lumbricordes,* I found in the intestine of one case and of the whip worm, *Iricocephalus dispar,* I found in the coecum of another; but there was not a trace of the leprosy bacillus in any of them.

This brings me to the question of the contagiousness of this disease. From a somewhat extended observation of it in various countries and from having lived in a leper country for some years, I believe that absolute and intimate contact is necessary to convey the disease from one person to another. Dr. James Canthi, who studied this disease in Hongkong and Canton for several years, says, "It would appear that leprosy is on a level, in this point (contagion), as in many others, with tuberculosis, and just as tubercle is occasionally conveyed from one person to another, so it would seem leprosy is transmittable."

I have seen several cases of white men in China who have contracted the disease, and in a few cases I was able to find out how they got it.

There seems to be little doubt that the disease is in some way hereditary, although it does not often show itself in young children.

In many cases it does not develop until after the age of puberty; this occurs at a much earlier period in the tropics than in temperate climes.

Many of the leper girls do not show a trace of the disease at this time and are quite pretty—for Chinese. Their parents are very poor and they often sell these girls. This used to be done regularly and it was a common sight on Sunday to see a boat with a girl standing up in it as it was sculled toward Canton. It was known to all that she was for sale. This was done in the case of leper girls and others free from this taint. The man who bought one of these leper girls was hopelessly infected before the disease appeared unmistakably in the girl.

Some writers have tried to show an affinity between tuberculosis and leprosy, mainly because the bacilli have the same reaction to staining agents. When they are deeply stained with some of the anilin colors and then passed through an acid solution they retain the color, generally red, while all other bacilli are decolorized; and these,

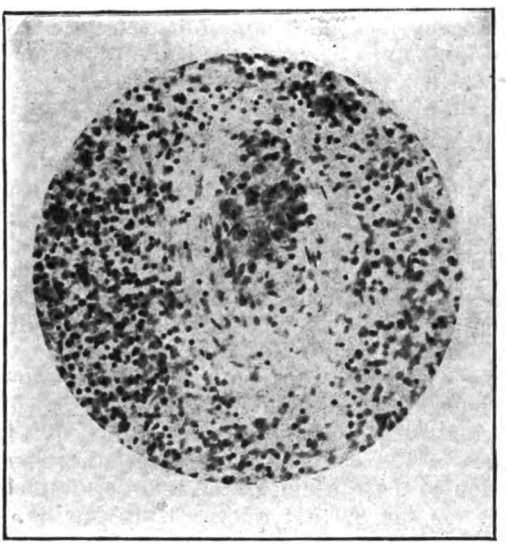

Fig. 3.—Section Through a Leprosy Nodule in the Tongue. Magnification X 400.

In it is an artery cut obliquely and completely blocked up. This shows how the nutrition is cut off from a part

when put in a contrast stain, generally blue, take this color, so that the tubercle or leprosy bacilli appear as bright red organisms amongst a number of blue ones. There certainly is not much difference, morphologically, between these two bacilli—not so much as there is between the bacillus of bovine tuberculosis and that of human. With leprosy it is all plain and clear that the bacillus produces the disease in a simple manner; with the tubercle bacillus it is different—we have a good deal to learn there yet. The bacillus of leprosy and that of tubercle have one point in common, that is, their power of staining after remaining in alcohol for many years. I have recently cut and stained some tissue I obtained at a post-mortem examination I made on a leper in Calcutta in 1884 and I find that the bacilli stain as well as they ever did. I have also some human lungs removed in 1875 and kept in alcohol. I made sections of

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them lately and find that the bacilli stain as brightly as they ever did. Bovine tuberculosis differs from this, as I cannot stain the bacilli in sections of lung which have only been in alcohol eight years, although I know they are there in large numbers. What these differences mean will probably be worked out now under the impetus of Koch's recent delivery. There is one thing about the leprosy bacillus—it is perfectly honest and will always be found where evidences of its action exist and will never require any "special pleading" to account for its non-appearance in a pathological condition which it has originated.

There are other conditions where bacilli having this color reaction, which I have described, are found. In 1883 a number of the Rhea, or South American ostrich, in the Zoological Gardens in London, died. I found on examining them that large and small areas in the liver were full of bacilli. These had multiplied in the liver cells and then destroyed them. These areas full of bacilli were surrounded in many cases by a more or less perfectly formed fibrous capsule, nature's effort to isolate them, as I have already described. I also found other parts of the body similarly affected. The action of these bacilli in the internal organs was similar to that of the lepra bacillus, but the disease could hardly be leprosy and there was nothing at all resembling tuberculosis; they had only done what the lepra bacillus does, caused the formation of abnormal fibrous tissue by chronic irritations.

I have also found a bacillus with a similar reaction in the liver of the boa constrictor and an Indian boa, python, teba, cold-blooded animals.

In camels, also, that died from bronchopneumonia, I have found the lungs so full of red-staining bacilli that the color was visible to the naked eye on holding the slide up to the light. In the face of these unexplained facts, how is it possible to dogmatize?

With regard to the prophylaxis of leprosy, it is extremely simple. Segregation and separation of the sexes.

In the case of tuberculosis the proposition is a much more difficult one, but if the following suggestions were adopted the disease could be stamped out in a few years:

First. Take the health of the people out of the hands of the politicians.

Second. Take as much care in mating human beings as you do with blooded stock.

Professional Smoothness.

By A. D. HARD, M.D., Marshall, Minn.

When an ordinary and decent physician asks for or advises a consultation, and a very ethical "member in good standing" of prominent medical societies is called in, one who "works" the people by a profound display of apparently excessive knowledge in such a way that the original physician is thereby supplanted, you may bet dollars to doughnuts that under the veneer of "ethics" the meanest kind of underhanded skullduggery has been used to accomplish the result.

Consultations, the ideal strengthening of ability by union of forces, afford the most advantageous opportunities on this delusive earth for ethicless men to boast of their ethics, and, ignoring the best interests of the poor patient, scramble for possession of the other doctor's practice, while shame-faced Honor retires to a back and secluded seat and covers her eyes. As the unsuspecting attending physician confidentially uncovers his past methods of diagnosis and treatment candidly, for the welfare of his patient, this professional vampire eagerly searches the course for openings by which he may falsely impress the anxious minds of friends and onlookers with ideas of his superior qualifications and ability, for no other purpose than to proselyte the honest doctor's practice.

He will assume to be excessively scientific, extraordinarily equipped, and limitlessly careful, thereby building an awe-inspiring halo around his selfish scheming head that casts a shadow of intended oblivion around the other doctor, from which it will take years for him to emerge. But give him sufficient time and he is bound to emerge, for in the sieve-shaking of men in the hands of Time, deceitfulness falls through and "Virtue alone survives."

Yes, the clever physician who aggressively "goes after" practice, not limiting his endeavor by the confines of the "path of honor," will probably succeed, as he ruthlessly places his cruel foot upon his brother's neck as a stepping-stone to success; but let us hope that his course will be like that of a rocket, *i. e.*, somewhat brilliant as he goes up, but merely a stick as he descends.

Even as "The course of true love never yet ran smooth," so the pure white page of an honest doctor's life will be occasionally soiled by a selfishness-propelled "butter-in" who sneaks into his list of patrons through the doorway of consultations.

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DEAFNESS.

A New Method of Treatment.

By OSCAR F. BAERENS, Ph.G., M.D.,
Professor of Diseases of the Ear, Throat and Nose, St. Louis College of Physicians and Surgeons, St. Louis, Mo., 1898-1910.

It may be truthfully said that fully 80 per cent. of deaf patients are unsuccessfully treated at the present time by physicians in both general and special practice. A far greater number are fleeced by the various quack concerns throughout the country who have medicines or appliances for sale in numberless variety.

There are reasons. According to my records, kept during a period of twelve years in both clinic and private practice, at least 75 per cent. of all cases presenting themselves for treatment are afflicted with chronic catarrhal deafness involving one or both ears. This particular form of ear disease is termed the bug-bear of otology by ear specialists. In the treatment of this aural affection the general practitioner meets his Waterloo always, and the average specialist only less often. By the average specialist I mean the majority of specialists. The quack only treats the condition, he never cures it. The ablest aurists of the world have labored for years to solve the problem confronting them in the treatment of catarrhal deafness, and the success of their efforts is no greater at this writing than it was twenty years ago. It is only in the treatment of purulent (running ears, etc.) condition involving the mastatoid cells and adjacent bony structures that real progress has been made, resulting happily in the conservation of thousands of precious human lives. Where and whose is the fault? First of all, insufficient knowledge on part of the doctor. During his student days he has very little opportunity to see, much less study, abnormal conditions of the human ear. Clinical material is largely made up of certain cases, either running ears or very advanced cases of deafness, pronounced incurable and dismissed by the chief clinician. The average college is meagerly equipped in the wet or dry specimens of ears. Pictures, charts and other illustrations are scarce and the student finds the study uninteresting, and such it remains when the cares of later active practice takes up his time and attention. Unless he develops a liking for this special branch of study he will not acquire text-books nor a sufficient number of instruments with which to make even an examination—if, indeed, he has learned how. Cases of ear troubles that come to him are treated with empirical indifference, and they drift along and eventually fall into the hands of the quack and finally, after much loss of time and a greater or less amount of money, come to the specialist, whose fame has extended to their recognizance. In the majority of cases, after a careful examination has been made, the sufferer is told that no promise of a cure can be made; or, indeed, if there is any hope, it will only be after a very prolonged course of treatment has been instituted. Fortunate is he who meets with an honest and truthful man.

Another reason is found in this, that Nature herself has made it impossible for man to investigate for himself the structures most concerned in this particular form of ear trouble. With the aid of minute lamps and reflectors an examination of the larger and deeper organs of the body has been made possible. By means of suitable instruments and light we examine the depths of the eye, but the intricate and delicate mechanism of hearing is concealed within bony walls and obscured from investigation. No real progress has ever been or will be made until research and investigation are first made possible. Another unfortunate condition is found in the fact that there is no pain attending the onset of chronic catarrhal deafness. The delicate nerve supply is protected from injury by its bony enclosure, and the onset and progress of the pathological condition is not manifest until sometimes years have elapsed. Even then immediate removal of the cause and persistent vigorous treatment will do much to stay the ravages, but, as it often happens, the patient is unable, or unwilling, to leave home for treatment at the hands of a competent practitioner, and contents himself in the purchasing of one or more of the various hearing devices so alluringly advertised in nearly every magazine coming under his notice. Needless to say, his hearing does not improve, and several times I have found it necessary to institute surgical measures to save life where ear drums had set up septic infections in the external canal, and several times found the ear drum and ossicles to be seriously involved.

The etiology of catarrhal deafness is not sufficiently well understood by the rank and

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file of the profession; otherwise many cases could be prevented, as are smallpox and typhoid. Fully fifty per cent. of cases are due to abnormalities within the nose or throat, or both, such as adenoids in the young, enlarged tonsils, nasal polyps, deflections of the septum. Some cases of congenital deafness are found occasionally, and also injuries to the ears, due to detonations from large guns; diseases, such as syphilis, tuberculosis, scarlet fever, measles, rheumatism, grip, typhoid, diphtheria, are responsible for many cases. The common cold is a fertile source of many cases of acute catarrhal deafness, as are certain medicines administered for too long a time and in too great quantities.

In the treatment of deafness we have made very little progress until very recently. Medicines are of very small value. The Politzer air douche, the Eustachian catheter, the Delstaribe masseur, the pneumatic otoscope, the vapor bottle, the heated medicated air treatment, pneumo-massage, faradization, all these old-time worthies have been tried year in and year out, with only indifferent success. All are of some slight value, however, and should not be condemned.

The usual symptomatology includes voices in the head, ringing, buzzing, crackling, and is known as Tinnitus. He may or may not hear better in a noise. He may or may not hear the ticking of his watch or clock, or the spoken word. Inspection of the drum may reveal a pearly, thickened and retracted drum head; perhaps it is entirely destroyed or partially so. There may be a stiffened condition of the ossicles, or we may find a stricture of the eustachian tube. Any of these conditions may be found. Hearing may be ever so greatly impaired, still we find when making the hearing tests that he can distinctly hear the vibrating fork when placed against his teeth, forehead or mastoid, showing that the sound perceiving apparatus is not involved, and that only the sound conducting mechanism is at fault.

What is to be done for him? Instrumentation will have little effect on the condition. Operations about the nose must often be done, if for no other reason than to institute proper treatment, or in the hope of at least staying the progress of the trouble. In cases of the removal of adenoids the most wonderful results have been obtained in the young. Injections or insufflations are more often more injurious than beneficial.

The keynote of treatment is found in the word nutrition or absorption of catarrhal deposits by the blood stream, by means of mechanical means. While aurists are agreed upon this, and while they know that whatever results they have obtained have been brought about by mechanical means, they also know that the ideal instrument has been slow to make its appearance. It is with much pleasure that I call the attention of those interested to an instrument which has been constructed for me by a mechanical genius who has been a sufferer from ear disease since childhood. With this instrument I have been enabled to obtain results in simple chronic catarrhal deafness which I would have believed impossible two years ago.

The instrument is comparatively a simple one. It consists of a metallic air-tight compartment over which is adjusted a flexible membrane (as in the human ear). Upon this membrane an attachment is made to vibrate with great rapidity, producing true sound waves. These are conveyed through metal and rubber tubes to the ear, either through the nose, by a suitable attachment, or through a special catheter into the middle ear through the eustachian tube or through the external auditory canal. An auxiliary instrument is connected with this sound chamber by which a suctional massage is combined with the generated sound waves. This is of exceptional value in cases of ankylosis of ossicles, or of impaction of the stapes. These two instruments may be used simultaneously or independently of each other, according to indications. Compressed air and the electric current are used as the motive forces, and by using a rheostat and cut-off valve the intensity and force of the sound waves and suction may be perfectly regulated and controlled. Many of my friends who have examined this instrument have expressed their approval and delight, and have satisfied themselves of the therapeutic value thereof. By a few very simple experiments the practicability may be ocularly demonstrated to any one's satisfaction.

While primarily constructed for the treatment of simple catarrhal deafness, some surprising results have been obtained in cases of head noises and also in cases of running ears, but notwithstanding all this, the rule is this: If an affected ear has its integral parts intact (no destruction of ossicles or injury to the auditory nerve or similar pathological conditions) and the

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diagnosis of simple chronic catarrhal deafness is made, that patient will be benefited by this method of treatment, without the use of drugs and without pain, and the improvement, as near as can be foretold at this time, will be permanent. I do not feel that I am saying too much relative to the value or the efficiency of this mode of treatment.

"How is improvement brought about through the use of this method?" has been asked of me many times. My answer is, this instrument produces physical changes. First, there is stimulation, and through stimulation we have hyperemia. This means increased blood supply. We bring into activity certain parts which have been rendered useless by catarrhal secretions and thickening, and more or less immobilization with disturbance of function has resulted. Increased blood supply means increased nutrition, and eventually absorption and ultimately restoration of function. I have had some failures, but I have been able to help fully eighty per cent. of all accepted cases. Can this be said of other methods? The answer rests with you.

303 Commercial Bldg.

The Urinary Ammonia in Routine Work.

By Henry R. Harrower, M.D.,
Chicago, Illinois.

Professor of Clinical Diagnosis, Medical Department, Loyola University, Chicago; Member American Association for Clinical Research, etc.

I believe that I am not overstating when I say that not one *pro mille* of the men now doing clinical laboratory work in general practice—certainly not one per cent.—are making the quantitative test for ammonia in the urine as a routine. The reader will quickly be able to decide in his own particular case whether I am right or not.

There are two great reasons for this state of affairs: it is not known how easy the test is, and how little time and skill it takes; and its advantages in general practice are not appreciated nearly as much as their importance really warrants.

It will be my endeavor in this paper to call attention to the simplicity and accuracy of the so-called Malfatti-Rongese test, to compare it with the expensive and tedious Folin test now commonly used in the larger laboratories, and to give good and sufficient reasons why the general practitioner should take any of his valuable time in carrying out the test and making the calculations.

To begin with the latter consideration: The urinary ammonia index is an excellent guide to the resisting powers of the organism against certain toxemias, affording us very definite evidence of an autointoxication by certain organic acids. The repetition of a few facts which the physiological chemists have found out for us will quickly explain why this factor is the important clinical and prognostic guide it is claimed to be here.

Ammonia is one of the most important products of proteid metabolism. Urea, the most important of the urinary solids, consists of a combination of nitrogenous metabolites among which ammonia is prominent; urea being chemically ammonium carbamide (CH_4N_2O). It has been definitely learned that the substances which go to form urea are combined in the liver. Extensive animal experimentation has shown that the arterial blood of animals contains approximately 0.4 millgrams of ammonia as compared with a corresponding 1.85 milligrams in the portal blood. These substances, before they reach the liver, are termed "urea precursors" and, it must be understood, are alkaline in reaction.

When the blood is charged to an abnormal degree with the acid wastes formed during the putrefaction of nitrogenous materials in the intestines, and also in a disordered metabolism, in the wise economy of Nature they are promptly combined with the alkaline urea precursors, thus rendered neutral and practically harmless, and excreted in the form of other ammonia compounds in place of urea. Hence one can readily see that a markedly increased ammonia index shows us that there is an increase in the amount of acid in the blood, or rather, an increase in the amount of these acid substances being produced. Besides this we learn that the body is performing its work as best it can under the unfavorable circumstances, by neutralizing these acids as fast and as thoroughly as possible, and maintaining, as nearly as it can, the normal blood alkalinity. An increased ammonia index, therefore, tells us whether there is a tendency toward acidemia, and to what extent; whether the body is handling this disturbance aright and calls for the administration of other alkalies to take the place of the urea precursors, and thus allow them to be normally combined to form urea and eliminated as such.

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Normally there is only a small amount of ammonia passed daily. The figure varies with the diet, being usually a little less than 1 gram per day, probably nearly 700 milligrams. This represents a percentage of about 0.054 per cent, *i. e.*, 540 milligrams of ammonia per liter of urine. This corresponds to between 4 and 5 per cent. of total nitrogen.

From the foregoing it will be seen that the ammonia index can be made of not only diagnostic and prognostic, but of really therapeutic value in many cases—so many, in fact, that it is best to make this test a part of the every-day urine examination.

In one disease this figure is probably of as great importance as any of the urinary findings. In diabetes mellitus I believe that the ammonia index ranks equally with the acetone and diacetic acid tests, and far outranks the quantitative estimation of the glucose which may or may not be present. It is now thoroughly understood that in diabetes it is not so much the amount of sugar passed that endangers the life of the patient, but rather the amount of the acids produced in the tissues due to the perverted diabetic metabolism, which, when carried into the blood, depletes its normal alkali content and tends toward systemic hyperacidity (acidosis) and the fatal coma. In these cases the ammonia index is, of course, very high, frequently reaching to 3 or 4, or even more, grams per day. This high figure shows how thoroughly these abnormal diabetic acids are being neutralized and is naturally an evidence of serious impending danger.

In certain diseases of the liver, notably hepatic cirrhosis, acute yellow atrophy and carcinoma (any condition in which the liver cells are degenerated), this combination of the urea precursors is not always properly effected, since the liver cells are unable to perform their functions, and as a result the ammonia percentage rises at the expense of the urea—the total nitrogen being considered as remaining constant.

Considerable work has been done by certain investigators on the underlying causes of the various obscure toxemias, especially the toxemias of pregnancy, cachexia due to cancer and the severe anemias, and the changes in the metabolism coincident with them. In these diseases the ammonia index is often very much increased, and thus points us to needed treatment—*judicious alkali administration*. Other factors increasing the ammonia in the urine are: (1) The ingestion of inorganic acids and of organic acids which cannot be thoroughly oxidized; (2) the ingestion of much fat (due probably to the disassociation of a part of the fat into fatty acids); (3) oxygen starvation and fevers.

From a personal communication from Dr. G. C. Mathison, of University College Hospital, London, I extract the following paragraphs, as they have a direct bearing upon the subject under discussion; and contain several important facts put in language which cannot well be mistaken:

"Of course, the relation of ammonia to urea is valuable, almost as valuable as ammonia to total nitrogen, for where the ammonia has increased, it is generally at the expense of the urea.

"The urea nitrogen, which one obtains by multiplying the urea by 28/60, is usually from 85 to 90 per cent. of the total nitrogen; the ammonia nitrogen (14/17ths of the ammonia) is usually from 4 to 5 per cent. of the total nitrogen. Urea determined by any good ureometer, such as the Doremus instrument, is quite accurate enough. Thus the relation may be expressed: ammonia nitrogen, urea nitrogen, 1:18. If this ratio rises to 1:10 it is very suspicious, if to 1:6 it is distinctly pathological. Over 1.5 grams of ammonia per day is very suspicious; over 2 grams distinctly pathological; 0.7 grams is a good normal figure.

"It is, I think, well established that urea precursors are fixed by acids, so that urea is lessened and ammonia is increased. It must be remembered that the figures I have given only apply where the patient is getting a fair protein diet, such as 'full hospital diet.' If, as in many toxemias, vomiting is present, the patient may really be ingesting an insufficient amount of food. This I rather suspect to be often the case in the toxemias of pregnancy, where increased output of ammonia is reported. Also the ingestion of large quantities of acid will cause an increase in the ammonia output."

Regarding the test for ammonia in the urine in general practice, quite a good deal might be said; but I will confine myself to the explanation of the formalin method first described by Malfatti and Rongese, which is by far the simplest and best test. As compared with the Folin test it has several points of superiority: (1) In accuracy it is practically the equal of the Folin test; (2) it requires no extra and expensive

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apparatus; (3) it occupies two or three minutes instead of three hours or more; (4) with one additional reagent (very easily obtained) and a minimum of time it can be added to the routine urine examination.

The test is as follows: First estimate the urinary acidity of 10 c.c. or more of urine by the titration method, using decinormal soda solution and phenolphthalein indicator (½ to 1 per cent. in 50 per cent. alcohol). Then add 2 or 3 c.c. of neutral formalin (no absolute amount is needed—enough to produce the reaction)—a 20 per cent. solution of commercial formalin to which a few drops of phenolphthalein indicator have been added, and enough alkali to make it just faintly pink. Almost immediately the pink color formed as the end-result of the acidity test disappears, due to the disassociation of the ammonia present combined with acids. The ammonia unites with the formalin to form hexamethylenetetramine, while the acid previously in combination with the ammonia is set free, thus discharging the pink coloration of the mixture. More decinormal soda solution is now carefully added until the pink color returns. The amount of decinormal soda solution in c.c. required to produce the second pink coloration represents the urinary acidity which has been passed in association with ammonia, which factor is used in the determination of the ammonia index. All that remains to be done is to multiply this last figure by an arbitrary factor which has been found to represent the amount of ammonia in each c.c.. If 10 c.c. was the amount of urine used in the test this factor is .00068; if 20 c.c. was used it is .00136, and if 25 c.c. it is .0017.

Some have advocated the addition of 10 or 15 grams of powdered potassium oxalate before titration in order to sharpen the reaction, but for general purposes the writer considers that this need hardly be done.

To give some comparative figures of a number of tests made by the long Folin method and the short Malfatti method, I append here the results of seventeen carefully-made tests, which show that the figures obtained from the Malfatti test are usually slightly higher than those from Folin's test. This is probably due to the fact that the addition of the formalin liberates not only the acids combined as ammonia, but also disassociates the amido-acids. It will be noticed that these comparative figures include a number of cases in which acetone, diacetic acid and oxybutyric acid were present.

Amount of Urine in 24 Hours.	Grams of Ammonia in 24 Hours. Folin Test.	Malfatti Test.	Remarks.
400 c.c.	.483	.496	Normal
420	.459	.491	Normal
620	.280	.319	Normal
3260	3.884	4.057	All diabetic acids
1475	3.891	3.975	All diabetic acids
860	3.22	3.31	All diabetic acids
3030	3.927	3.899	All diabetic acids
3280	3.790	3.635	All diabetic acids
975	.538	.622	Acetone & diacetic
640	.662	.683	Acetone & diacetic
690	.433	.483	Acetone & diacetic
490	.236	.312	Normal
1500	.636	.643	Sugar—no acetone
600	1.128	1.265	All diabetic acids
700	.44	.477	Sugar—no acetone
500	.284	.316	Sugar—no acetone

In a paper published a year or more ago in the New York *Medical Record,* I described an instrument for the rapid estimation of ammonia in the urine, and there called it an "Ammoniometer." It was essentially a modification of my acidimeter, and was arranged so that powdered potassium oxalate could be added as a part of the test. In my estimation this has detracted from the practicability of the above instrument. On the other hand, a large number of tests made with my small acidimeter have shown me that it may be used for this test in question as well as for the estimation of the urinary acidity. The only suggestion or modification that I would make is that the tube be made ½ or ¾ inch longer and graduated to 150 degrees, instead of to 100 degrees as at present. The technique for the use of this instrument would be: Fill the tube with urine to the 10 c.c. mark, add 2 drops of indicator, and then slowly add the alkali solution, inverting from time to time to mix it, until a pink color is just produced. The acidity in degrees is now noted and 2 c.c. (20 degrees) *or more* of the neutral formalin solution is added. (NOTE.—It is well to add the formalin to an even number or level on the tube). Having marked down the level of the fluid at this juncture, carefully add as before the soda solution until a pink color just appears for the second time. Each 10 degrees (1 c.c.) of solution used to cause the return of the pink color represents .00068 grams of ammonia *in 10 c.c.*

To find the percentage, multpily by 10;

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and to find the amount of ammonia in twenty-four hours multiply by the amount of urine passed in c.c. divided by 10.

The use of the acidimeter in preference to the burette method in office work is recommended because of its greater ease, cheapness and simplicity. The two factors learned in the completed test—the urinary acidity in degrees and the ammonia index—are certainly of immense clinical significance. The careful physician will many times find that these two figures alone are indications for treatment which will be found to aid materially in securing needed therapeutic results, and incidentally in adding to one's professional prestige with a minimum of time, bother and expense.

72 Madison street.

A Deodorizer.

EDITOR MEDICAL COUNCIL:

On reading Dr. Kenney's appeal for a deodorizer, it appears to be next to impossible for any one to invent or formulate a deodorizer that would be of itself odorless. Such a remedy would have to be very powerful as a disinfectant to overcome the bad odor of a sick room, while at the same time it would have to be used in very large quantity. As we know, the bad odor with which we have to contend is being constantly emitted from the sick; the atmosphere of the room is always contaminated with it, and if to resist it we have to mingle it with an opposing odor, a very simple and efficient remedy for the purpose is,

Efflorescent soda carbonate, 1 ounce.
Tr. iodine, ½ ounce.
Water, 1 gallon.

Agitate it well and leave it exposed in an open vessel, and within a few hours it will develop a rather pleasant and very diffusible odor.

It was while experimenting with iodine on the prostate that I discovered the following remedy to be a very useful deodorizer:

Efflorescent sod. carbonate, gr. iv.
Tr. iodine, M. x.
Water, oz. vi.

From this perscription I injected two drams into the rectum of a patient having gleet of the prostate. There was considerable enlargement of the prostate, associated with tumefaction, pruritus and trismus of the anus. The injection was made about 9 p. m., and some time during the night the rectum discharged about a half ounce of clear, dense, gelatinous mass, and, as the man described the incident, it simply slipped out of the rectum without any sensation except that of a slight spasmodic relaxation of the rectus sphincter muscles. Every abnormal condition yielded admirably to the one injection; but, as long continuation of the remedy finally proved, it was valuless as a curative agent. Still, I consider it an excellent, if not an unequaled remedy in reducing inflammation and tumefaction of the prostate. It can be tried in those cases, and probably prove as a good auxiliary to more efficient treatment. As a deodorizer, it can be sprinkled or sprayed around the sick room.

PATRICK T. MELDON (Experimentalist).
San Bernardino, Cal.

Banish the Disagreeable Odors.

EDITOR MEDICAL COUNCIL:

Referring to the article of Dr. L. Kenny, of Troy, N. Y., in November, 1910, COUNCIL, I should like to express my appreciation of the doctor's suggestion for some deodorizer that would banish the disagreeable feature of nursing the sick. To me one of the most objectionable features in the care of the sick is the very obnoxious bodily odors arising from a bed-ridden patient. It is not only a source of true regret and "mental suffering" to the patient, but a most disagreeable and repulsive experience to the nurse. This is especially so of a lying-in patient. Years ago I was led to try some form of a harmless deodorant that I might employ with this sensitive class of patients and I luckily fell upon a preparation which is not only an excellent deodorizer but antiseptic, soothing and healing as well—boro thymol. It is cheap in price. If the doctor will dampen his sterile gauze in pure borothymal and apply to the external genitals of his puerperal patient, I am sure there will be gratitude from three—patient, nurse and doctor.

As to the offensive odors attending other sicknesses I will especially mention one, and that is the peculiar offensive odor arising from a sufferer from mucous colitis. These poor, nervous, afflicted individuals are very sensitive, anyway, and this odor has given several of mine no little concern. The discovery of an innocuous deodorizer would certainly transfix the glory of some dear brother.

A. E. BUCHANAN, M.D.,
Fremont, Neb.

EDITOR MEDICAL COUNCIL:

"Sterilize your Thermometer" is the heading of an article in November COUNCIL. I have carried a pocket sterilizer for seven years. It is composed of a strong glass tube with hard rubber fittings. The thermometer is introduced through a rubber diaphragm and screws in like in the ordinary case. I carry in the tube a 1 per cent. solution of mercuric chloride in 50 per cent. alcohol. The tube is not bulky. I purchased my outfit through the Norwich Pharmacal Company, of Norwich, N. Y.

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The company has stopped making the cases, as the profession does not seem to want a sterile thermometer. It seems too much work to wash your thermometer before using it.

P. H. VON ZIEROLSHOFEN, M.D.,
Croghan, N. Y.

EDITOR MEDICAL COUNCIL:

Kindly refer your subscribers or enquirers regarding the specific or radical cure of acute gonorrhea, as practiced by the late Dr. F. Augustus Lyons, of New York, N. Y., to *American Medico-Surgical Bulletin*, May 1, 1895, to *Medical Record*, May 4, 1895, and to *Medical Brief*, February, 1905.

These Medical Journals also have "Reprints" for distribution to the profession.

DR. F. S. GRANT.
220 Broadway, New York.

What Do You Think About It?

To THE MEDICAL COUNCIL:

When a young lad, going to school, we had some knotty problems in mental arithmetic—had no slates and pencils.

Sometimes it required several days and nights to solve a particularly tough one. After retiring at night we've worked on them and gone to sleep—"all at sea"—and awakened in the morning with the solution as plain as daylight. This is known as "unconscious cerebration." It's simply wonderful.

If the mind is concentrated on a particular thing, as a mechanical problem, say a machine to pare apples—and will think and think and think about it, it will "come to it"—solve it—as certain as can be, if the effort is sincere and prolonged.

Howe worked this way on the sewing machine needle. He always had the eye in the big end and it wouldn't work. Finally, after month's of hard work and thought, he went to bed and had a dream. He dreamed that a gang of savages were after him with spears and there were holes in these spears near the point. He got out of bed—made a needle with the eye in the sharp end—no one had ever thought of such a thing—and the problem was solved.

There are other similar instances.

W. B. P.

Prompt Digitalis Effect.

In Excerpta Medica No. 11, 1910, Dr. Adolph Rasp, Kuttenplan, Austria, reports on a case of Vitia Cordis, as follows:

Multipara (V), aged 44, end of eighth month, showed intense hypertrophy of right ventricle, and mitral insufficiency. Small doses of infus digitalis were given (0.3:200). Labor normal at term. Child nourished artifically, but flourishing. Three weeks after parturtion I was called suddenly. Found patient with cyanosed lips, imperceptible pulse, probably 130-140. Fortunately I had at hand for just such emergency cases, Digitalysatum, and administered 5 drops on sugar. Two minutes later the pulse was full and strong, and slowed to 84. The patient progresssed well, anasarca of left leg receded. According to my experience, 5 to 6 drops of Digitalysatum t.i.d. are sufficient to secure digitalis effects and the dose may be increased to 12 drops t.i.d. to secure full results.

The Business Side

OF MEDICAL PRACTICE

While we, as physicians, desire to be scientific students and practitioners of medicine, yet we desire also, for the welfare of our dependent ones and for the sake of our standing in the community, to secure a fair compensation for the services we render to our fellowmen.

Are You Getting Your Reward?

Doctor, we are entering upon a new year. It is a good time for you to begin to develop a sound, energetic business policy that will enable you to secure for yourself and your family some of the material rewards of your scientific attainments and your professional activity. You have been so desirous of being recognized as a man of science that you have ignored the great advantage of being known also as a sound financier. People respect the man who knows what he is worth and commands it, while they are ready to walk all over the one who servilely responds to all demands and meekly accepts whatever they are willing to allow for his services just whenever they choose to pay it. You owe it to yourself and to those dependent upon you to put yourself on an equality with other men in your community in a position of honorable prosperity. Your capital is invested in your education and equipment, and it is more than the average merchant, manufacturer or farmer of your locality originally invested in his establishment. You have a right to a proper return on that capital in addition to a reasonable reward for your own time. It just happens that, in your case, capital and labor are combined.

It is assumed, in the first place, that you have done all you can to prepare yourself, in education, training and equipment, for rendering first-class, valuable services to those who call upon you, and that, by study and investigation, you keep abreast of the rapid progress of the profession. This constitutes the very basis of your service to society for which you demand a share in its rewards.

Honest work, then, deserves honest fees.

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Establish a carefully planned fee bill, preferably the one in effect among your fellow-physicians in your community, and stick to it.

Next you must establish a simple, thorough system of bookkeeping—one that never fails to show the proper charges in plain language (not signs), and by which you can show any patron, whenever and wherever you meet him, just how his account stands. This will save you many dollars every year that you would otherwise lose.

Next, establish and rigidly follow the custom of sending out bills on the first day of each month for all amounts due at that time. Most people will pay the doctor's bill as promptly as any other bill if the doctor will only give them the usual business reminders as other business men do.

Then, having laid the foundation for securing your income, establish the habit of paying your own bills, of whatever nature, with absolute promptness. Nothing will do more to give you a high standing in your community than this. You will find, also, that it pays handsomely to get all the usual commercial discounts for prompt payment. When you get three per cent. discount for paying within ten days a bill that you are going to pay anyway in thirty days, you are getting at the rate of about forty per cent. per annum on the money involved. Where can you do better?

When prosperity actually comes your way and you are securing more than is required for a respectable living, your first investment should be in the necessary real estate for your own establishment, so that you can be your own landlord. You will feel an independence that will be a stimulus to you in your daily work.

A matter of great importance to you will be to begin early to take an enterprising interest in the material welfare and development of your community. As a physician you have a more or less scientific education and hence are prepared to grasp readily those principles that lead to more scientific agriculture, horticulture, stock raising or other industrial operations than now prevail among your people. It is your privilege to point out to them how they can improve their methods and thus increase their income. Encourage them to take and read the best periodicals and other literature pertaining to their work.

It should also be your constant endeavor to educate them in regard to the various get-rich-quick schemes that all too successfully coax the money out of their pockets that should be kept at home for many useful and necessary purposes. You should be in frequent conference with your local banker, who has facilities for obtaining special information on such subjects, and resolve to know as much as posible along this line so as to keep at home the money that would otherwise go to unscrupulous swindlers.

Doctor, this is just the beginning of the establishment of correct business principles and habits, but we shall have to defer a further consideration of it to another time.

In the meantime, we wish you a happy and prosperous New Year.

Dumont, an old New York detective, says that there is just as much originality among crooks now as there was in the old days, only they get into high finance or some of the get-rich-quick games now and don't waste their abilities in the more dangerous grafts of safe-cracking and highway robbery.

Doctor, if you get literature from H. L. Barber Co., Chicago, about their Hale-McLeod Oil Wells, you would do well to remember and heed what we have previously told you about the oil well game. Submit it to your banker and see how much he would be willing to loan on this stock as collateral.

We have inquiries from many of our subscribers about the "Fortune Colony," preparing to operate a fire insurance company. The literature doesn't look good to us and our advice to our readers would be to let it alone.

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Doctors are receiving circulars from the Auto-Press Company. Our belief is that you will never realize much on an investment in that company. Better invest nearer home.

Many are receiving the booklet of the American Telegraph Typewriter Co., headed "$200 then—$100,000 now," and starting out with the usual reference to the Bell Telephone Co. We have never known a really successful company to start out in that manner, and we don't believe this will be any better than the rest.

Dr. F. M. Lennard, of Texarkana, Ark., in a letter asking our opinion regarding the "Bonded Rapid Collection Agency," of Milwaukee, Wis., writes: "I have many old accounts I cannot collect. Your Physicians' Pocket Account Book keeps me on tab and O. K. with all my recent accounts."

The literature of the collection agency mentioned seems all right. Can any one give us any experience with them?

Dr. L. W. Lord, of West Ossipee, N. H., sends us a copy of the following letter which he sent to the publishers of Hampton's Magazine after receiving their stock proposition:

; Gentlemen: I have been deluged with your circular letters relating to the sale of your stock, and am writing you this explanation so you may know why I have not "invested."

You state that at present you are making a special offer of eight shares of preferred for $40, with a bonus of one share common, which we can call $5 more. The Thompson Investment Company, of Philadelphia, have made me an offer in the same mail of eight shares of your preferred at $3, equal to $24, and one share common at $2.15; total, $26.15, or nearly one-half your office price.

I think did your readers know this fact there would be few to "bite" at your alluring literature.

I have learned my lesson in the purchase of magazine stock. I first bought Munsey's, then Everybody's; later Pearson's, and that gold brick The Circle.

The first two made good, but after getting my help in the tight pinch I was frozen out. The last two, the least said of the better.

I am writing my experience in this field, which I am sending to various medical magazines so the medical profession may be benefited, as doctors seem especially exposed to the contagion of get-rich-quick bacilli.

Also, I have the assurance from Mr. John Grant Dater, of Munsey's, that he will have something to say regarding magazine stock promoting, which will appear shortly in his financial department.

Now, I haven't anything against you or your magazine, which I buy and read, but I take exceptions to your claims and the use of the word "investment," for your proposition, like the others, if a gamble pure and simple.

Hundreds of people invested in The Circle magazine; people who believed in the uplift of mankind and the preservation of the home circle, and these were people who would not bite at mines, rubber trees or remote Elysian fields in Florida or California. They have lost their money, and one physician whom I know personally dropped $700, which represented all his savings for some years of driving in the snow and rains of a country practice.

You are not doing the right thing in promoting any such a deal, no matter how rosy the future appears. Yours very truly,

L. W. Lord, M.D.

Dr. Henry Borst, of Robertsville, Ala., sends us a circular he received from a party in Huntsville, Ala., which reads as follows:

Dear Doctor: Will you be so kind as to write and mail me two prescriptions that you have used and know, that when properly compounded, are reliable and will give good results in the following diseases: One to be an anti-malarial tonic, preferably to be prepared in tablet or pill form; the other for syphilis, to be prepared in pill or liquid form.

These prescriptions will be submitted to several of the leading chemical and pharmaceutical houses of the United States and will be made of only the purest drugs and in the most scientific way, the right being allowed at the same time to use such vehicles and make such changes as may become necessary in order that said prescriptions may be compounded to give the best results.

The formulas will be printed on the labels, the same given an appropriate name and the product supplied to your druggist for your prescription use.

Believing that you would rather prescribe your own formula than any other, the same having been scientifically prepared, I am anxiously awaiting your reply with your prescriptions.

Yours very truly,

This is evidently a scheme to get from physicians prescriptions which can be made up into patent medicines and sold to the public. They want to get the benefit of other people's study and experience.

Editor Medical Council:

I have just received a circular from the Webster-Townsend Company, of 320 East Houston street, San Antonia, Texas, operating the Canada Colony. They claim to have the best land in Texas, 150 miles south of San Antonia, near Springfield. I do not wish to invest, but only send this to you, as I believe you would know the standing of the company, and if it is "hoax" you may save many a dollar from being lost in the scheme.

Dr. T. R. Mason.
507 Germania street, Columbus, Ohio.

We know nothing of this particular land

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proposition, but it is safe to say that no one should buy without first going to see it; also, that no one should buy to hold as an absentee owner. If one cannot go and settle on the land he would much better keep his money.

Dr. J. A. Park, of Westminster, Ohio, writes us as follows:

My experience with the International Rating Association has been very pleasant and profitable. They collected accounts where I could not get the parties to answer my letters. They require no advance fee. The first $10 collected goes to them, then 10 per cent. of all other collections. So far I have found them honorable and am away ahead by placing my old accounts in their hands.

BEST IDEAS FROM RECENT LITERATURE

Vaccine Treatment of Rheumatism and Arthritis Deformans.

The marvelous results obtained with streptococcus vaccine in treating articular rheumatism can only be appreciated by those having a large experience with its use in this disease, writes Dr. G. H. Sherman, Detroit, Mich. (*N. Y. Medical Jour.*, May 21, 1910), in reporting his three years' experience in general practice with bacterial vaccines; also information from other physicians whom he supplied from time to time with vaccines.

Doctor Sherman adopted the general rule of practice, when there is a doubt as to what organism causes the infection to employ a mixed vaccine corresponding to the various organisms that are suspected as being present. If no infection exists corresponding to the vaccine that has been given, no harm has been done, but the patient has had the benefit of the doubt. This practice has yielded clinical results justifying the conclusion that in the near future streptococcus vaccine will be as generally used in treating rheumatism as diphtheria antitoxine is now used in treating diphtheria.

Whether the cause is a streptococcus or a specific organism, the "Micrococcus rheumaticus," is not definitely settled, but the results obtained with inoculations of streptococcus vaccine indicate that the streptococcus is the real pathogenic organism in this disease.

Rheumatism is here roughly divided into acute, subacute, and chronic, leaving arthritis deformans to be considered separately.

Acute Rheumatism.

If vaccine treatment is started early, about four-fifths of the cases will begin to improve one or two days after the first inoculation, the temperature becoming normal, swelling and pain in joints disappearing, and recovery taking place in from one to two weeks. Inoculations should be made at from four to seven days intervals. Where these prompt results do not take place with the vaccine treatment the course is very irregular and modified. Other inflamed joints may follow, but will improve again where treatment is started early. In these acute cases the patient is never confined to bed over a week. In only one case did endocarditis occur. After a few inoculations the patient gets a good appetite, with an equally good digestion, resulting in a marked improvement of the general health condition. This is particularly noticeable where the patient's digestive organs have been disturbed by giving salicylates. No special diet is required. Good, wholesome food, and enough of it, gives the best results. When the general health improves, and the patient gains in weight, the rheumatic condition disappears.

In subacute rheumatism, where other treatments, used for four or more weeks, have failed, the results obtained with streptococcus vaccine vary. Some cases respond promptly, while others improve gradually, but if treatment is continued they all get better.

Chronic Rheumatism.

Repeated attacks of articular rheumatism from which recovery has never been complete leads to chronic rheumatism. Treatment with streptococcus vaccine is very satisfactory, when we consider how inadequate conventional treatments are in these cases. Where the inflammatory process has not been severe enough to materially cripple or enlarge the joint, the results are good. Some improve steadily after the treatment is started, while others improve for a while, and then relapse again, but if the treatment is persistently kept up all these cases will get better. Treatment should be continued for from two to six months or more, if necessary. It is remarkable how nature will restore those rheumatic joints if the inflammatory process is gotten rid of. Some cases recover after one or two injections, while others require from ten to twenty-five doses.

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Exophthalmic Goitre—New Principles in Treatment.

The benefits which follow the ligation of the superior thyroid artery in the treatment of exophthalmic goitre, in the opinion of Dr. G. W. Crile, of Cleveland, Ohio, expressed in a paper read before the Mississippi Valley Medical Society (*Medical Fortnightly,* November 25, 1910) are due mainly to the break in the nerve supply of a work *hyperplasia,* and the brain cells show ligation.

In exophthalmic goitre the thyroid shows a work *hyperplasia,* and the brain cells show a work *exhaustion.* In this condition the brain sends a more or less constant flow of stimuli into the thyroid, and which responds by an increase in its secretion. This increased secretion causes an increased activity of the brain cells. In this manner the brain and the thyroid reciprocally goad each other, and this deadlock, if not broken, continues until one or the other is worn out.

Breaking of the nerve connection between the brain and the thyroid gland renders the disease curable. In no case is a cure effected by operation alone, and no patient is cured until the thyroid and the brain are both restored to the normal. This is best secured by operating in such a manner that there is no excitation of the nervous system, nor of the thyroid gland; hence no volatile outbursts during or after the operation, and no operative danger; the patient should be placed in a rest cure for a month or more, depending on the severity of the disease.

If, on the other hand, the patient after the operation is at once immersed in the environment in which the disease originated, there will be many disappointments. The plan of treatment by a combination of a benign operation, followed by a prolonged rest cure, will restore the patient, in so far as tissues are not already irreparably destroyed, to the bloom of health.

Treatment of Middle Ear Suppuration in General Practice.

The first essential in the treatment of chronic suppuration of the middle ear, according to Dr. Francis R. Packard, of this city (*Therapeutic Gazette,* May 15, 1910), is a complete understanding of the conditions which produce it, and those associated with it. We reproduce here only the gist of the requisites of successful treatment as set down by the author.

Many cases will yield to simple daily cleansings with warm saturated boric acid, or normal salt solution, followed by astringents. The safest syringe, in the hands of the average practician, is the little rubber ball syringe, with the elongated rubber tip. In its use great care should be taken to fill the bulb with the solution as much as possible, and afterward to expel the air from the syringe by squeezing the bulb with the point held upward. After washing out the contents of the external auditory canal and the middle ear, dry the parts carefully with absorbent cotton on an applicator. If during the use of the syringe the patient should complain of dizziness, we should stop at once.

If crusts obstruct, these should be softened with peroxide of hydrogen. Cotton must be used only to mop and absorb moisture, *never to wipe.* After each final drying insufflate with boric acid. Cotton should be placed into the external meatus, and replaced with a clean pledget as soon as soaked.

If granulations are present after the cleansing, apply a strong solution of silver nitrate, gr. xxx or gr. lx to the fluidounce, by means of a cotton pledget, through a speculum, drying away carefully any excess.

If the silver solution does not prove efficacious, try instead applications of zinc sulphate, gr. x to the fluidounce, or cupric sulphate, gr. v to the fluidounce.

If, after some weeks, the treatment outlined above has not checked the discharge, try the instillation of alcohol, employed thus:

On alternate days cleanse and dry the aural canal and gently fill it with alcohol—first a fifty per cent. dilution. Gradually increase to the U. S. P. strength. Generally this is well borne in the third or fourth application. Allow the alcohol to remain some minutes, then dry, dust and plug.

Where the discharge is not copious nor fetid, the simple dry treatment will often answer very well.

Oil of cajuput, though official in the U. S. P., is but little used in this country. This is a pity, as it stands at the head of the carminatives. It will relieve colic and flatulence quicker than any of the other aromatic oils. Five drops is usually sufficient as a dose, though it may be given as high as 10 to 15 drops.

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Vicious Circles in Urinary Diseases.

Of more than ordinary diagnostic value are the four distinct vicious circles in the urinary region defined by Dr. Jamieson B. Hurry (*British Medical Journal,* Aug. 6, '10), briefly abstracted as follows:

(1) In cases of chronic prostatic obstruction the walls of the bladder undergo considerable hypertrophy with the obvious intention of overcoming the obstruction. Such hypertrophy is compensatory and beneficent, but if the demands are excessive, the limit is reached and hypertrophy is replaced by degeneration and atrophy—forming a vicious circle.

(2) In cases of cystitis associated with the presence of a calculus the formation of ropy mucus and the deposit of phosphates is probably a conservative process intended to encase the irritating calculus and thus shield the vesical walls from injury. But the opposite effect often follows, since the deposited colloids and phosphates lead to the growth of the calculus, thus increasing, instead of lessening, irritation.

(3) Where a heavy hydronephrotic kidney takes up a lower position in the abdomen, the constant ache that resulted from dragging on the ligaments may be relieved and the movements become less irritating. But if such descent leads at the same time to kinking of the urethra, the benefit vanishes, since the displacement causes the hydronephrotic kidneys to increase in size and to cause more and more disturbance.

(4) Lastly, where in cases of obstruction to the passage of urine renal secretion is increased, owing to reflex action, the increased flow is probably intended to wash away the obstacle, much as a foreign body lodged in the cornea calls forth increased lacrimation. But if the increased flow fails to remove the obstacle, its effect is but to increase the accumulation of urine and thus intensify the mischief.

In each instance a foul turn in the pathologic processes foils the beneficent powers of the system to counteract disease.

Treatment of Lobar Pneumonia.

The least material and human adornment we can get in the room of our pneumonia patient, besides a nurse, the better, Dr. W. S. Love, Bertrand, Mo. (*Journal of Mo. State Med. Assn.,* May, 1910), writes in giving his up-to-date treatment of lobar pneumonia.

Two things he puts down as above all else demanding our watchfulness, namely, the toxemia of the second stage and the condition of the heart in the third. In the first stage the successful practician, above all else, keeps tab on the temperature record. Good ventilation without drafts is of first importance in the room from first to last.

Since no two cases are exactly alike, Dr. Love finds no place for routine measures, but treats systematically each case on its own merits. Calomel, salines, the cotton jacket, etc., are used early. If there is much pain he resorts to hot poultices. During the first stage small doses of opium and quinine in some form are employed.

If the temperature proves troublesome aconite and veratrum, also cold sponging, are used. For the cough, if tight, one of the ammonia salts is resorted to. If the heart requires support, strychnia, or an alcoholic generally answer. If resolution is slow, iodide of potash, followed by a hematic, preferably iron, quinine and strychnine, is the treatment.

Along about the fifth or sixth day, if the toxemia is getting the upper hand, he sponges freely with hot saline solution, or applies cool compresses. In every case the patient is encouraged to drink plenty of water and eat sufficient liquid and semi-solid food.

Acute Infantilism.

This affection, though always recognized in a way, has seldom, if ever, been given the distinctness and prominence it deserves, according to Dr. H. M. Hull, Atlanta, Ga. (*Journal-Record of Medicine,* May, 1910). The underlying causes and some of its obscure symptoms make it essential that the condition be treated as a distinct disease.

Infantilism is a condition characterized by a retarded growth, more or less rachitic phenomena, and frequent attacks of auto-intoxication, almost invariably following the ingestion of certain articles of diet, and associated with grayish, exceedingly offensive stools. Mentally the child is rather more bright and active than normal. The disease is primarily a disorder of the intestinal tract. There is an inability to digest starches and fats. Marked indicanuria recurs with each new outbreak of indigestion.

The little patient is particularly restless at night. There is disturbance of the circulation associated with cold hands and

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feet, and clammy perspiration especially affecting the skin of the scalp, face and neck; and lastly, inertia, causing the child to be content to sit quietly all day long rather than engage in the ordinary activities of childhood.

The retarding of growth is due to the excessive elimination of lime salts, chiefly as soaps of the fatty acids, through the feces. This loss of lime is greater for some starches and fats than for others. The infant improves or grows worse with the amount of indican in the urine.

The treatment is chiefly dietetic, the following having proven successful in one of the typical cases Hull reports:

Lactone buttermilk, rice, a special biscuit, fruit juices, and gelatine, with occasionally broiled beef and lamb chops. Under this treatment the weight has increased to 39 pounds, the normal for that age being about 41 pounds. The indican his disappeared from the urine and the type of the intestinal flora has changed. The least indiscretion in diet, giving too much starch, will bring about a recurrence of indicanuria, and will give foul grayish stools containing an excessive quantity of fats.

Treatment of Plural Effusions.

If the effusion is serous and not copious in quantity, aspiration is not urgent, according to Dr. E. B. Montgomery, Quincy, Ill., (*The Medical Fortnightly,* Nov. 10, 1910), such cases yielding quite well to sodium salicylate in daily quantities of from 60 to 90 grains, though tubercular and not rheumatic in character. Often very considerable effusion will be cleared up, by this treatment, within ten days.

If, however, as sometimes happens, absorption does not take place, it is better to aspirate and remove the larger portion of the fluid, always of course under suitable antiseptic precautions. Rarely will it be necessary to repeat the operation.

If the fluid accumulation is purulent, the nature of the infection should be ascertained by subjecting the pus to a laboratory examination. If the empyema has followed a pneumonia and the amount of pneumococcus pus removed is not large, the method of treatment advocated by Dr. John B. Murphy should be tried. According to this method empyemas which do not communicate with a bronchus, or communicate with abdominal viscera, may be cured by aspiration and injection of a few drams to 2 oz. of a 2 per cent. solution of formalin in glycerin. This solution should be mixed at least 24 hours before it is used; otherwise it can produce symptoms of shock and local necrosis. One injection usually suffices for a cure.

But if after the lapse of several days the temperature still keeps up and the symptoms do not improve, incision should be made under local anesthesia, and a drainage tube inserted. Resection of the rib is rarely necessary, though far too frequently advised.

Importance of Night Feeding in the Treatment of Consumption.

To the five-principle treatment of tuberculosis, namely: (1) The patient breathes fresh air, day and night; (2) an abundant diet of mixed foods is provided, with judicious, enforced overfeeding with proteids; (3) exercise or rest, according to certain clinical conditions, is systematically regulated to the individual's circumstances; (4) isolation from excitements and distractions of ordinary households; (5) complete medical supervision, Dr. Albert S. Ashmead, Pocono Mountain Home for Convalescents, Canadensis, Pa. (*The Therapeutic Gazette,* Sept. 15, 1910), would add a sixth principle—(6) a system of night feeding.

There is more curative power in night-air than in day-air. This Ashmead proved by a strict comparison between the weather-bureau observations furnished by the official in charge of the U. S. station at Pocono Lake and the clinical observations made on patients in Pike county. The night exposure to the northwest and west minds of Pocono Mountains, always with a minimum precipitation of 2 or 3 per cent., was better than the day exposure. This he attributed, in part at least, due to the scheme of feeding the patients every three or four hours during the night, thus securing for them a more perfect mental and physical repose.

The following epigrams, roseate with optimism bred from large experience, cannot be too generally pondered:

Until a few years ago it was believed that consumption was incurable, hereditary, and in many cases inevitable. We now know that from 81 to 89 per cent. of all consumptives are curable. The 19 or 11 per cent., respectively, would recover, too, if they had come under the curative umbrella early enough.

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Close and stuffy rooms are the commonest breeding grounds for the tubercle bacillus. Constant breathing of fresh, germless air is the best preventive of tuberculosis.

One of the most important prescriptions that the phthisical patient should apply is repose—physical, intellectual, and moral. Exercise with mental relaxation, while taking it, is best for the milder or earlier cases.

Medical supervision of everything—the patients' getting up and lying down, their food, their exercise, and their rest—is a key to success.

Absolute immobilization would accomplish most in advanced cases. The prime advantage of sanitarium treatment is that here the patient's energies can be best centered on the one important object—*to get well.*

A talking patient is slower to get well than a silent one.

Most persons overlook the fact that a sick human body must be protected from the cold beneath as well as above it. In the Pocono Home twelve blankets in the coldest weather (20 or 30 degrees below zero) are put on top of the body and six beneath, over the mattress.

Scraped beef with strychnine is admirable. Beef is an important item in the consumptive's dietary, too much neglected now-a-days with the newer fads.

What interferes greatly with the rapid cure of consumptives is the swallowing of sputa by the patients. This only keeps up interminably an autoinoculation, and prevents the mesenteric and nutritive glands from properly preparing the chyle.

If we want to cure our consumptives quickly, the lungs must be furnished with the best air and the chylification system must be kept in best order.

Consumption is the easiest disease we physicians are called upon to cure. Three and a half months is the limit for cure of ordinary cases—at most six months.

Endeavor to find out not *how much a patient can eat,* but on *how little food he can gain weight.*

As soon as a consumptive, after some few weeks' exposure on these hills, begins to create his own fat, his cure is half completed.

Nasal Hemorrhage.

Apply pledgets of cotton soaked in peroxide of hydrogen or in a 10 to 20 per cent. solution of antipyrin. Avoid iron styptics.

Clinical Use of Phenolphthatein.

That we have in phenolphthalein a valuable purgative of coal tar origin worthy of official recognition is the opinion of Dr. John J. Gilbride, Philadelphia (*Jour. A. M. A.,* Jan. 29, '10). He urges upon his colleagues the importance of prescribing the drug under its proper name, and that its many proprietary titles be studiously shunned. He prefers to give the drug in capsule form and three- to five-grain doses repeated three times a day, until free bowel movements result, then only one capsule daily, preferably at bedtime.

Some patients respond very nicely to a five-grain dose given every two or three days. The drug appears largely innocuous, but it is well to bear in mind that at least in one case poisoning followed the administration of fifteen grains. The drug is tasteless and not expensive.

At present the clinical use is limited in the main to the treatment of simple functional constipation in adults. If used in children the initial dose should be small—about half a grain.

It is claimed that the usual locking does not follow a course of treatment with this purgative. It must be borne in mind that the opposite—*diarrhea*—is rather frequent after a course of free treatment.

Drainage Treatment of Uterine Obstruction.

Clinical results of eighty-five cases of uterine obstruction in which he employed drainage as the main therapeutic measure are reported by Dr. A. Ernest Gallant (*Medical Record,* April 16, 1910). The obstruction is broadly divided into two classes, that attended by uterine flexion and that independent of flexion. Obstruction is evidenced by the pain when passing a sound through the internal os, by atypical menstruation, by sterility, or by intractable headache.

In treatment the cervix must be dilated to 38 F., the cavity curetted and irrigated, and a bivalve or fenestrated drain sutured into the cervix, there to remain for from four to six months. When obstruction is associated with sepsis following abortion, miscarriage, or labor, in addition to the three-inch drain which has been inserted, a roll gauze wick must be introduced into the vagina and made long enough to protrude

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between the labia so as to come in contact with the vulvar pad, thus establishing continuous drainage from the interior of the uterus to the outside pad, a very important factor in the prevention of vaginal absorption and toxæmia.

When obstruction is combined with version the fundus must be rotated forward and supported by an Albert Smith pessary, inserted broad end down.

Nutmeg Poisoning.

A case of acute poisoning in a small boy, from eating about half a dozen nutmegs, is reported by Dr. G. D. Lind, of Johnstown, Pa. (*West Virginia Med. Jour.*, Sept., 1910). The boy had received the toothsome nuts from an older boy as *candy* about 4 p. m., and this fact did not become known until the following morning, when the effects had disappeared. The lad, in the height of the poisoning, appeared to be under the influence of a powerful narcotic. His pupils were dilated, he staggered in attempting to walk, and on being awakened from sleep would immediately go to sleep again. He complained of a fullness in his stomach, and said that he was drunk. Pulse and respiration were slow; he had no nausea or pain.

Early Diagnosis of Tuberculosis.

That tuberculosis is to-day one of our most hopeful of all chronic diseases may be conceded as encouragingly prophetic of future success in other chronic diseases now rated quite as intractable as was tuberculosis only ten or twelve years ago. But our hope as regards the latter disease can be realized only by making early diagnosis the rule instead of, as at present, the exception. And this can be made the rule only by making the means of such diagnosis the working capital of practicians in general. At present these means are too much in the hands only of the specialist and consultant.

Two specialists, both connected with popular institutions, respectively in Pacific and Atlantic coast States, Dr. F. M. Pottenger, Monrovia, Cal., and Dr. Gordon Wilson, Baltimore, Md., (*New York Medical Journal*, Sept. 3, '10), contribute each a leading paper on this important subject, from which we condense briefly as follows:

No one factor is more potent to defeat the cure of tuberculosis than a delayed diagnosis.

No other factor needlessly exposes countless numbers of persons to the danger of infection like that of late diagnosis.

We can conceive of nothing in the management of tuberculosis so productive of good results, directly for the individual and indirectly for the masses, as early diagnosis.

Taken in conjunction with a complete history of the case, the older methods of examination, percussion and auscultation, are adequate for most diagnoses at the hands of specialists, but unfortunately not of the general practician, who too frequently lacks in the training of daily practice.

In nearly every instance incipient tuberculosis will be suspected from a carefully prepared clinical history of the case, because one or more of the crucial symptoms are sure to appear.

A bare chest is the first essential of a physical examination. Early diagnosis can never be made in a hurry nor without a thorough and painstaking examination.

Apart from special training and practice, mere percussion and auscultation furnish little that may be relied upon. But it is of prime importance in every problem in diagnosis to know when to suspect tuberculosis.

Malaise, loss of strength and endurance, altered appetite, decline in weight, increasing nervousness, vague pains throughout the chest, especially aching between the shoulder blades, acute pleural pains, a slight tendency to cough or to become short of breath on exertion, repeated colds or the spitting of blood are, one and all, tell-tale signs. They should invariably direct attention to the chest. If, added to one or more of the above symptoms, there is a slight rise in temperature and a pulse easily affected by exertion, we must rule out tuberculosis before any other diagnosis is made.

It is a common and disastrous fault in medical practice to treat symptoms without making a diagnosis. It is not sufficient (a) to know that the patient is run down—we should want to know why he is run down; (b) that the patient should have pains in his chest—we must determine the source of

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those pains, not by a guess, but by a scientific examination; (c) that we should know that a patient is expectorating blood—the important thing is to know where the blood comes from, remembering in giving an opinion that in nearly every instance of this kind the cause is an underlying tuberculous lesion.

The microscope and tuberculin tests are valuable, but they are merely aids. The chief factors in accurate diagnosis must be clinical history and physical examination; nevertheless, the conscientious physician must bring to the aid of his patient all measures which will assist him in diagnosticating the disease.

Be it remembered that the patient is only too apt to minimize his symptoms. He is prone to say that he does not expectorate much; "only in the mornings," or "only when he has a cold," or "only from his catarrh."

In suspicious cases, sputum, no matter how little in quantity or what the patient's opinion of its source, should be subjected to carefully repeated, if necessary, microscopical examination for tubercle bacilli. In such cases it is most advantageous to examine the sputum when it is 24 hours old, or to digest the sputum first.

The tuberculin test is of great practical value in early diagnosis and is fast becoming popular now that we have been given the conjunctival, cutaneous, and intracutaneous methods, which appeal to the profession as being less dangerous than the hypodermic method.

A reaction to tuberculin is positive evidence that tuberculosis is present, but no more. Without focal reaction there is no evidence as to the location of the lesion. In the presence of suspicious symptoms pointing to tuberculosis of some organ and a positive tuberculin reaction (excluding focal reactions) a great responsibility confronts the practitioner, for it is his duty to determine the location of the lesion.

Often, fairly convinced of the presence of tuberculosis by the clinical history, the physician is forced to make a negative diagnosis because he cannot find the evidence upon physical examination to confirm his suspicions. Tidal percussion, apical outline, and the movements of the diaphragm will not help the average man, because he is not experienced in their detection.

A valuable sign quite within the reach of practically every physician is the lagging apex or apices. A lagging apex should always cast suspicion on that part of the lung. Disease is present although it is not necessarily active.

Lagging is best elicited by the examiner standing behind the patient, who is seated on a stool. The examiner's hands are so placed that the thumbs are over the supraspinous fossæ and the fingers are allowed to extend down over the anterior portion of the chest. Any irregularity in the air entering either apex is quickly noted.

Spasms in the muscles covering an apex of the lungs always indicates acute inflammatory change in that apex or the adjacent pleura.

Rigidity of the cervical, intercostal and pectoral muscles adjacent to an apex always portends active inflammation of the lung or pleura of that apex, just as we find rigid abdominal muscles over inflamed abdominal viscera.

The symptoms of incipient pulmonary tuberculosis are just as frequently indicative of other diseases—may on first examination seem to make up a typical case of another disease. With equal frequency the deception may assume the opposite phase; that is, the clinical picture may seem typical of pulmonary tuberculosis yet prove in the end another disease.

In the opinion of Dr. Wilson, the oldest tuberculin test—the subcutaneous method—is the most valuable and safest. In children under seven, the younger the patient the more valuable the skin test.

Diagnosis of Tuberculosis in Young Children.

Special care and training are required to diagnose tuberculosis in children because of the diversity of the point of entry of the infection, the variety of pathological changes and the wide range of clinical symptoms, according to Drs. Henry L. K. Shaw and Arthur T. Laird, of Albany, N. Y. (*Archives of Pediatrics,* July, 1909), from whose practical paper we abstract only the most salient points, as follows:

The modes of infection have a most important bearing on the diagnosis. Prenatal, congenital or hereditary tuberculosis is so rare that it can be disregarded. The question of transmission of the disposition is still undecided. The offspring of tuberculous parents show great susceptibility to infection and are apt to be poorly nourished, with low vitality. But special sus-

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ceptibility, it is believed, comes oftener from contact than by inheritance.

Inhalation is probably by far the most common route of infection. In the home of a tuberculous adult the dangers to children are enormous. Dust from a room so occupied has been found virulent for six weeks. There is a tendency to overrate the dangers of milk from tuberculous cows. If such milk is always virulent it is difficult to conceive how any child escapes.

A diagnosis of tuberculosis in a child by rational symptoms alone is impossible in the early stages. Holt, as a result of his wide clinical experience, considers as probably tuberculous every infant who has been for any length of time in contact with a tuberculous parent or other member of a household. The history of tuberculosis in the family of a sick child is almost *a priori* evidence of the presence of some form of tuberculosis. Careful and tactful questioning is often necessary before the source of human contagion is established. Association of the child with tuberculous parents or other consumptives is a matter of such importance in the diagnosis as well as in the prevention of the disease that every member of a tuberculous family should be examined as a matter of routine.

Next in importance are the predisposing causes of the disease. These include unhygienic surroundings, improper feeding, and the various children's diseases, especially measles and whooping-cough. Tuberculosis occurs more frequently in artificially fed infants. This, however, is no indication that the infection is always of the bovine type. Bottle fed babies have a greatly lessened resistence to any infection. So also children with hypertrophy of the lymphoid tissue of the nasopharynx. That the latter is a frequent point of entry of the infection remains unproven.

The mode of infection doubtless has some influence in determining the clinical form, though less than was formerly supposed. Trauma and the acute infectious diseases may develop foci of lessened resistance. The most common types of the disease in early childhood are *glandular tuberculosis* (adenopathy), *tuberculous meningitis, acute miliary tuberculosis, tuberculosis of the bones and joints,* and *pulmonary tuberculosis.*

Autopsies show that tuberculous children dying from whatsoever cause have tuberculous glands in from 80 to 100 per cent. of the cases. The great dangers to the child are that the deposits in these glands may extend into the lung or adjacent organs or may ulcerate into a blood vessel and produce a general miliary tuberculosis. They produce no symptoms characteristic in themselves and their presence is rarely detected by the ordinary physical examination of the chest.

The anemia presented in marked cases is of the chlorotic type. A low leucocyte count—10,000—may be said to favor tuberculosis, but a high one—over 20,000—does not exclude it.

The temperature is of less importance in children than in adults, except in acute processes. Sputum examinations are easy enough by the Holt method of collecting, which is to excite a cough by irritating the pharynx with a small bit of muslin in the jaws of an artery clamp. The secretion is readily secured on the muslin when it is brought up by the cough. Muslin is to be perferred to gauze or absorbent cotton. Time and patience are required, for, in most cases, repeated examinations are necessary.

The "cutaneous tuberculin test," in process similar to vaccination, has grown in favor and is widely employed. It is simple, easy of application and absolutely without danger or unpleasant effects. Its use is most applicable in children and its results are to be relied upon. As latent tuberculosis is rare in infants a positive reaction is a warning to be heeded.

The "conjunctival tuberculin test" has been practically abandoned as unsafe, while the "per cutaneous test" is too delicate. The "stick reaction test," esteemed by the Germans, has considerable merit, and should always be resorted to in connection with the "subcutaneous tuberculin test," relied upon in local sanatoria.

Finally, look out for *skin tuberculides.* These are frequently overlooked, as not more than two or three can be found on the entire body. They are small, slightly raised, round papules, red in color, but later on often turn brownish. The crest is covered with a scale which can easily be scraped off, leaving a small crater-like depression in the center. Removing this scab does not cause any bleeding and there is never any tendency to ulceration. The finding of any one or more of these would show us the existence of a latent tuberculosis and put us on our guard and suggest therapeutic measures which used thus early would save life by preventing the spread of the tuberculous process.

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Treatment of Rheumatic Fever.

In the treatment of rheumatic fever most favored in the past decade—the salicylic acid treatment—the sodium salt—has best stood the test of time and experience, according to Doctor Nicara (*American Journal of Medical Sciences,* March, 1910), the acid itself being too irritating to administer internally over a length of time. The dose should be taken well diluted:

℞ Sodii salicylatis.....240 grs.
Aquæ destillatæ.....q. s. ad ℥ij
M. et S. One teaspoonful in water every two hours.

Sometimes the salt is better borne, or less disagreeable to the taste if a little glycerin is added, as:

℞ Sodii salicylatis.....
Glycerini .....āā ℥iv
Aquæ destillatæ.....q. s. ad f℥ix
M. et S. One teaspoonful in water every two hours.

Another excellent preparation of this series is methyl salicylate, this being a volatile oil containing well over 90 per cent. of the true oil of wintergreen and of the oil of birch, or is produced synthetically, and where properly prepared should answer the purpose of the natural oils. Of the three the oil of wintergreen is, as a rule, preferred. It may be given in capsules, in emulsion, or in milk. The methyl salicylates are also used in form of an ointment:

℞ Methyl salicylatis,
Menthol,
.....āā 15 per cent.
Petrolati .....q. s. ad ℥j
M. et S. Local use.

An ointment containing ichthyol has been much praised. For example:

℞ Ichthyol .....25 per cent.
Petrolati .....q. s. ad ℥j
M. et S. Local use.

The author claims that counter irritation is indicated rather in subacute and chronic states than in the acute. Two forms only are regarded worthy of consideration—the cautery and the fly blister. Of the two, the former is much better, as being easier of application, easier of control, less likely to be followed by bad results locally, and entailing no danger from absorption. The cautery is flicked lightly over the part, care being taken to avoid severe blistering or deep burns. The part is then smeared with petrolatum, oil or ointment.

In applying the fly blister, say to the knee, an inch square is a good size and four such might be used, one above and one below on either sde. Shave and cleanse the part. Oil the edges of the blister and apply a little petrolatum to the skin adjacent to the blister, to avoid its spreading. Leave the blister in position for four to six hours, and if a blister has not formed in the skin by this time apply a warm poultice to the part, which will hasten its formation. Puncture the blister on its dependent edge, evacuating the serum but not destroying the protecting epithelium. But in the presence of a damaged kidney, as may occur in the course of rheumatism, the dangerous irritating effect of this drug on the parenchyma of the kidney, which it causes in the course of its excretion, must be kept in mind.

Pain in Abdominal Diseases.

In order properly to interpret abdominal pains a minute history of the particular case is essential, writes Dr. W. H. Harsha, of Chicago, for, continuing the theme, in the absence of all other factors, the fact that there is pain loses its significance. The relation of pain to taking food is also of great value particularly in duodenal or gastric ulcer or the various stenoses, benign or malignant. The direction and extent of painful radiations and the association with hyperesthesia, local tenderness, and muscular rigidity are of great importance as indications of the site and gravity of the lesion.

The arm pain in angina pectoris, the shoulder or upward radiation in gall-bladder disease and downward, forward and testicular pain in nephritic colic are well-known examples. The pain of abdominal disease may be either spontaneous or elicited by pressure, body movement or position, and it may be influenced by psychical, thermic, mechanical or chemical means, all of which may be utilized in cases to aid in exact diagnosis. Diseased viscera cause pain at or near their various sites, but there are many exceptions which lend importance to the reflex or referred pains. A number of abdominal diseases, especially of the more acute variety, are first heralded by pain rather than by change of size, position, or other physical conditions.

The severity and nature of the pain is often a gauge of the urgency of treatment. Taking cognizance of the value of pain associated with local distentions and peristalsis, or the absence of peristalsis, we may

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locate stenosis or other forms of obstruction, calling to our aid submerged palpation, or palpation in the bath, which will enable us to detect induration, which is otherwise not palpable. By observing the time-relation of pain to other symptoms, the effect of food, drugs, cathartics, cold, fatigue, movement, position, jarring, fist percussion, anesthetics or electric stimulation, we should be able to increase the per cent. of correct diagnoses.

It has frequently happened that laparotomy has been done for appendicitis when a movable kidney, pyelonephritis, ureteral stone, typhoid, diaphragmatic pleurisy, salpingitis, or some other condition is present. Age, sex, occupation, or previous history may give valuable aid.

In childhood, intestinal troubles prevail, and we are likely to encounter appendicitis, intussusception, or tuberculosis, and in advanced age malignant disease. In women, the pelvic organs are frequent sites of disease, while gall-stones are frequent. Lead colic may simulate organic disease. A history of indigestion, with vague epigastric pain, may aid in determining a perforation of the duodenum or stomach, and a record of previous inflammatory trouble in the abdomen may explain a sudden intestinal obstruction.

Among the less frequent conditions may be mentioned the meteroism with abdominal pain, resulting from the embarrassed portal circulation in cardiac insufficiency.

We should consider the possibility of disease of the central nervous system, such as tabes, herpes, or hysteria, disease of the spine, as caries, or spondylitis deformans. We should also consider the possibility of disease of the thorax, referring pain and rigidity to the abdomen; or to one kidney, referring the pain from stone to the kidney of the opposite side. Excluding pain from the cord, spine or reflex causes, we should remember that diseased viscera may be at the normal site, displaced especially by prolapse, or transposed.

Diuretic Mixture.

Potassium citrate, 2½ dr.; potassium bicarbonate, 80 grn.; spt. nitrous ether, 6 dr.; fld. ext. triticum, 6 dr.; syrup of lemon, 1½ oz.; infusion of flaxseed, 5 per cent. (macerate the whole flaxseed in *cold* water for half an hour and strain), 5 oz. A tablespoonful in a glass of water, every one to three hours, until diuresis sets in.

Diagnosis and Treatment of Chronic Backache.

An experimental study of persistent backache was made by Dr. Edward Reynolds and Dr. Robert W. Lovett, of Boston, respectively a gynecologist and an orthopedist, working conjointly for a period of three and one-half years, is published (*Journal A. M. A.*, March 26, 1910), with profuse illustrations and minute attention to details. Space can be given here only to a few of the more important points in the research and conclusions.

Chronic backache originates from accidents, strains, over-use, surgical operation, etc., and often no cause can be assigned. The laity frequently ascribes it to kidney trouble. The condition is most common in women. The pain is often aggravated during menstruation and in general is either unilateral or bilateral, but in the latter case on close questioning is usually found to be worse on one side than on the other. Local tenderness may or may not be present. If the back is exposed and the fingertips are placed over the erector spinæ muscles, perceptible spasm may be excited in these muscles by voluntary forward or lateral bending at the waist.

The affection is exceedingly persistent and seldom very severe, and its most striking characteristic feature is the patient's insistence on a habitual pain for which no adequate cause is apparent. A search for that cause was the purpose of this investigation.

The causes have been variously assigned by specialists and the general practitioner to the pelvic organs, to the muscles and joints, and to the nervous system. The uncertainty concerning its true nature is expressed by the many names applied to the condition, of which the most common are the following: Hysterical spine; neurasthenic spine; weak back; uterine backache; irritable spine; chronic lumbago; railroad spine; relaxation of the sacroiliac joints.

Without denying the existence of cases in which this symptom is the result of divers causes, such as actual uterine, spinal or sacroiliac diseases, these doctors are inclined from observations and experiments to regard the term *static backache* as more truly descriptive of the majority of cases. By which term is meant pain due to back strain incurred by an undue effort to main-

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tain body balance under the conditions of the individual physiology.

TREATMENT.—It is evident that a determination whether the original cause of the backache is primarily intra-abdominal or originally static is a necessary preliminary to intelligent or effective treatment. The former are purely gynecologic, or orthopedic, or mixed, and each requires to be treated according to the merits of the individual case.

In the cases originally static the treatment must be directed to replacing an incorrect attitude with a correct one. Massage and gymnastic exercises would seem to be the obvious method to follow. But practically this alone at the outset is generally unsatisfactory for the following reasons: One is dealing in most instances not with athletes with well-developed muscles, but with men, or more often women, of less than average physique as a whole, whose back muscles in particular are overstrained, weak and irritated. It is a frequent experience to find the backache made immediately worse by such treatment, even when given by skilled persons.

A properly fitting corset with a tight pelvic hold not only improves balance, but incidentally serves as a splint and support. It tends to correct vicious balance by carrying the center of gravity backward, thus relieving muscular strain; partially splints the lower back; and furnishes an artificial annular ligament to the glutei muscles. High heeled shoes are useful when comfortable.

It is regarded as the most essential point, that whatever the local mechanism which produces the symptoms may be, such backache is in a large proportion of all cases not a disease in itself (as suggested by such terms as "hysterical spine," "relaxation of the sacroiliac joints," etc.), but is a mere symptom-complex due to an abnormal attitude induced by peculiarities of the skeleton, lack of proper muscular balance, or abnormal conditions in the abdomen or elsewhere.

Forchheimer is a believer in elementary phosphorus in cases of rickets. He orders it in the form first prescribed by Kassowitz, which is as follows: Phosphori, 0.01 (gr. 1-6); olei olivae, 5 gm. (80 min.); pulv. acaciae, sacchari albi, aa 10 gm. (150 grn.); aquae, 75 gm. (2½ ozs.). Of this one-half to one teaspoonful is given two or three times daily; each teaspoonful contains about 1-130 grn. of phosphorus. It should be dispensed in a dark bottle, kept in a dark place and shaken well before use.

Alteration in Infant Stools an Indication for Change of Food and Treatment.

A clinical paper, of exceptional nursery value, on the above subjects was contributed by Dr. John Zahorsky, St. Louis, Mo. (*Medical Fortnightly*, Sept. 26, '10.) The following is the gist of this paper:

The stools of an artifically-fed infant resemble those of the breast-fed baby, except that in the case of those fed on some cereal decoction, or a milk mixture containing it, the stools are darker. When cows' milk is given, the stools are lemon yellow, and not orange yellow, as the stools of those receiving breast milk. Changes appreciable by mere ocular inspection pertain chiefly to color and consistency.

GREEN STOOLS.—As far as we know the green stool indicates that some irritant is present in the small intestine. It may be a purgative, as calomel or castor oil. It may be the products of sugar or fat decomposition, and the volatile acids formed no doubt are often the immediate cause. In breast-fed infants green stools may continue without affecting the health or growth of the infant. The presence of the condition in the babe that is starved is still unexplained.

Grass-green stools containing much mucus are symptomatic of follicular enteritis, a serious organic disease of infants; but, most commonly, light green stools merely indicate intestinal indigestion. The indication then is to clean out the intestinal canal, preferably with magnesia, or rhubarb, and so change the food that no irritant is formed. This, as a rule, means the reduction of the fat and carbohydrates, one or both, in the diet.

GREY OR CLAYEY STOOLS.—Generally, but in nearly every instance erroneously, this condition is attributed to absence of bile. Only rarely, in congenital atresia or catarrhal jaundice, is bile not found in clayey stools. Grey stools indicate excessive intestinal putrefaction and, while depending on an excess of protein, is very much aggravated by an excess of fat. It is these cases which often improve after a good dose of calomel, not that this drug increases the quantity of bile, but it inhibits intestinal putrefaction and hurries the bacteria out of the colon. The rule is to change the diet to a pure carbohydrate mixture for a few feedings, or for one or more days, if neces-

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sary. Some cereal decoction, such as rice water or barley water, is usually chosen, to which some milk, especially skim milk, may gradually be added. The putrefaction may also be modified by adding milk sugar in large percentage to the food. The popularity of malted milk, presumably, depends on its antiputrefactive quality, and this it derives from its contained maltose and lactose.

BLACK STOOLS.—When bismuth salts, iron preparations and acid of fruits and vegetables do not cause the color, it is most likely due to gastric or intestinal hemorrhage.

CURDED STOOLS.—It is generally conceded now that curds in the stool signify fat indigestion. The white soft curds are almost always due to soaps, that is, compounds of calcium and fatty acids. The hard curds have a nucleus of casein, but are enveloped by pure fat or soaps. The curds of soap are soluble in acidulated ether, while the hard curds are not soluble. The curds of casein become very much hardened by formicaldehyde solution, while it does not effect the soap curds. When curds are found in the stool the indication is to diminish the fat in the food, that is, give skim milk or buttermilk. If true casein curds are present, peptonizing the milk is usually efficient. It should be remembered that the digestion of fat is inhibited by either an excess of casein or carbohydrate, and, therefore, the soap curds may often be made to disappear by lowering either the protein or the carbohydrate percentage in the milk mixture.

DRY STOOLS.—Here is probably the most frequent cause of constipation. The stools are light in color and hard, owing to an excess of calcium soaps. The condition is at times difficult to correct. The dryness indicates that the stool moves too slowly through the colon and sigmoid. If the stools are offensive, secondary decomposition is taking place. Too often these cases are treated by prescribing an increase of the cream in the milk, with the intention of causing the stool to soften. This, as a rule, only aggravates the condition. When the stools are hard and light colored, the fat must be diminished. The sugar should be increased. Maltose acts well in these cases. One or two feedings of malted milk may be given daily, or some extract of malt added to each bottle.

The treatment is to reduce the fat and increase the soluble carbohydrates in the diet. Light brown sugar has served me well as a substitute for cane sugar in some of these cases.

LIQUID STOOLS.—This usually indicates excessive bacterial activity in the intestinal canal, especially fermentation. It is prone to occur when the carbohydrates are in excess. Maltose is especially likely to favor fermentation, and as a result liquid frequent stools are present. Putrefactive changes also favor the liquid stool. Certain foods containing a relatively high percentage of inorganic salt, such as whey, and meat infusions; grave diseases of the intestines; and, chief of all, any irritable condition in which the contents of the small bowel are hurried through the large. Hence, any agent that inhibits movement affords relief, but the mistake must not be made to bind up what nature means to throw off. After sweeping out all offending accumulations, the bismuth salts are still very popular.

MUCUS STOOLS.—This occurs in a variety of conditions and indicates that an irritant is present in the colon. The condition normally follows every brisk purgation. It may depend on simple indigestion or severe dysentery.

A subscriber writes us in regard to the able paper on the Treatment of Rheumatism, by Dr. Sheppard, in our September number, and objects to his mention therein of a therapeutic agent—A-F-Sal, or urasol. The doctor is right as to principle, but mistaken as to fact. This drug was formerly called urasol, according to what was thought to be its most prominent physiologic effect, as was the custom at that time, as instanced by such drugs as antipyrine, diuretin, etc. At the suggestion of the Council on Pharmacy and Chemistry its name was changed to A-F-Sal, to indicate its chemical composition. It is an original synthetic chemical compound, just as ethical as aspirin, medinal or other foreign chemicals so extensively mentioned in our society medical journals, only it happens to be made in Philadelphia instead of Germany. It is being extensively used by the principal Philadelphia hospitals and by many of our leading physicians. It is just as correct for a physician to use it in his practice and to mention it in his reports of cases as to employ quinine or mercury. Dr. Sheppard is a physician of the highest standing in his own city and State, a graduate of Princeton and University of Pennsylvania, and would not be a party to any procedure that is not strictly professional and ethical. We hope this statement of facts will be sufficient.

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BOOK REVIEWS

Psyche. A concise and easily comprehensible treatise on the elements of Psychiatry and Psychology. Max Talmey, M.D., New York. Cloth. 281 pages. Price $2.50. The Medico-Legal Publishing Co., West One Hundred and Twenty-sixth street, New York City.

In this book the author speaks of the mind in its normal and pathological conditions. He calls it by its Greek name, Psyche.

The subjects are so well analyzed as to give as clear and easy a comprehension of the science as is possible with as little reading as possible. The style is so simple and easy that the book reads almost like a novel. It may be read not only by the physician but by the educated layman as well. To give an adequate knowledge of the matter in which the subject is treated we present a brief outline of the divisions as given in the book.

Psychology or Physiology of the Mental Functions, including Pathology of Feeling or of the Affective sphere, of Ideation, of the Activity of the Will, of Consciousness, and Somatic Disturbances in the Insane.

Etiology of Insanity. As this subject is so important we give the subdivions: Classification of the Causes of Insanity. Influence of Civilization, of Religion, of Heredity. Stigmata of Hereditary Predisposition to Insanity. Psychical Influence. Influence of the Infectious Diseases, of Poisons, and of Trauma.

Course (Prognosis) and Therapy of the Psychoses.

Special Pathology of Insanity, including Mental Diseases Commencing after the early stages of the general development of the Organism. Mental Diseases dating from earliest childhood; Idiocy, Cretinism, Diatheses of Insanity.

This book should be read by all physicians as well as by others who attempt to make any study of the mental functions.

Diagnosis and Treatment of Diseases of Women. Harry Sturgeon Crossen, M.D., Prof. Clinical Gynecology, Washington University, St. Louis, Mo. Cloth, 1025 pages. 744 engravings. Price, $6.00. C. V. Mosby Company, St. Louis, Mo.

This book, being intended for the daily work of the general practicing physician, is devoted exclusively to the *diagnosis* and *treatment* of diseases of women as they are met with in the office and at the bedside. Questions of pathology, etiology, etc., are considered only in so far as they are necessary to throw light upon the main practical questions. As the reader is not expected to do the major operations, technical descriptions of these operations are left to the works dealing with these subjects from the standpoint of the specialist. However, full and clear instructions are given regarding the *diagnosis* of conditions requiring major operations and also the proper preparation of the patient for the operative work and the proper care of her afterwards so that she may be restored as nearly as possible to perfect health. To give an idea of the detailed manner in which the principal work of the physician—treatment—is considered, we give an outline of this one chapter:

Classification of therapeutic measures. Rest (complete rest, partial rest, sexual rest). Applications to lower abdomen and exterior of pelvis (moist heat, dry heat, cold, counter-irritation). Applications to external genitals, vagina and cervix (douches, concentrated solutions, powders, tablets, vaginal suppositories, tampons, tampon-capsules, pessaries, submucous injection of substances, local blood-letting, curet, cautery, electricity, X-ray, Finsen light, radium). Intrauterine treatment (medicated applications, hot water irrigation, curettage, cauterization, electricity, cervical dilatation, vacuum treatment). Applications within rectum (hot water irrigation, low enemata, high enemata). Aplications to lower abdomen and interior of pelvis (pelvic massage, pressure treatment, electricity). Applications to body generally (general bathing, friction rubbing, general massage, dress corrections). Postural methods and exercise (knee-chest posture, Trendelenburg posture, general exercise, special exercise). Internal (medicines, diet, psychotherapy). Operations.

We believe every family practitioner should have a copy of this book as a guide in his daily practice.

The Forsaken. By Ivan Trepoff. 180 pages. $1.10. The Cochrane Publishing Co., Tribune Building, New York City, N. Y.

This is a novel with the purpose of advocating the morality of divorce under peculiarly aggravating circumstances. The young wife discovers that her husband is a syphilitic, and hence her child is born diseased and soon dies. Anxious to have a healthy child, she solicits her doctor to become its father. Her husband dies of paralysis sequent to locomotor ataxia, leaving her to bear this healthy child after his death. The subsequent complications form the rest of the book. We see no special reason for its publication.

Journals Consolidated.

Doctor Albright's "Office Practitioner" has been consolidated with "Physicians' Drug News," and will be published in the future by the Physicians' Drug News Company, Newark, N. J.

This is a natural combination which will benefit the subscribers of both publications.

Dr. J. D. Albright, the editor and publisher of the "Office Practitioner," will become one of the editors of the consolidated journal.

The "Interstate Medical Journal," St. Louis, will contain in the January number a symposium on syphilis, giving a number of excellent articles by Osler, Noguchi, Wolbarst, Ravogli, Fordyce, and others of equal prominence.

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THE

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The Practice of the Future.

For millions of years man has been battling with hosts of enemies, the sting of whose shafts he could feel and whose ravages in his ranks he could realize, but of whose character and location he knew nothing. The miscroscope and the science of bacteriology have dispelled the enshrouding mists and revealed the enemy in plain sight, so that we now know just what we have to battle against—hosts of disease germs—and their exact location.

This great and epoch-making discovery has been followed by a period of experimentation to find the most effective weapons with which to overcome these germs without, at the same time, imperiling the safety of the individual. Our earlier experiments were in the line of chemo-therapy—the employment of drugs or chemical agents which would be fatal to the germs, but harmless to the host. In a few diseases—as malaria and syphilis—wonderful success has been achieved. However, most of the germ diseases have not yielded to this line of attack, so another assault was planned.

Shortly following the discovery of the germs themselves biologists began a critical study of their behavior in the human body and nature's method of repelling their invasions. About twenty years ago we indulged in an editorial outlining the probable course of this method and prophesying that this would be the therapeutics of the future. It is now rapidly becoming the therapeutics of the present.

In this issue will be found an important article by Dr. G. H. Sherman, of Detroit, Mich., upon "Vaccine Therapy in General Practice."

We have had the pleasure of inspecting Dr. Sherman's private laboratory, in which he has experimented and elaborated the vaccines which he has used in his practice.

There are other such laboratories, of more or less completeness, in nearly all our large cities, in which patient investigators are quietly working out the problems of bacterial invasion and repulsion, prophylaxis, individual immunity, and cure.

Dr. Sherman has promised us other articles along these lines, taking up different diseases in detail, with directions, technic and results.

Salvarsan, "606," the New Remedy for Syphilis.

The journals just now are full of "preliminary" reports and articles on this subject, most of which are rendered obsolete before they are printed, by more perfect technic developed by further experiments. Of one thing we are now certain—it is not an unfailing specific, instantly curative, and applicable alike to all cases. Yet it is certain that it does influence in a wonderful manner most of the cases in which it is

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correctly employed. They seem to be cured, and time alone will determine the liability to relapse or later development of the disease.

The technic of the administration is very important. In hospitals and in the practice of skilled specialists, probably the intravenous injection will be the prevailing practice, as being the more accurate method of administering just the dose required and with less liability to local disturbance. In general practice we believe the oil emulsion injected into fleshy parts will be preferred as being easier to perform. It is very important that the exact directions accompanying the remedy be observed.

In hospital service and in the practice of those who have proper facilities for having scientific blood examinations made, the Wasserman test will be depended upon for diagnosis and also for tests afterwards to determine the completeness of the cure and the question of the necessity for a repetition of the dose. In general practice, most physicians will depend upon clinical manifestations for the original diagnosis of syphilis, though the patient should at least be given the benefit of a Wasserman test at the last, when all clinical manifestations have disappeared, to relieve his mind as to the probability of future outbreaks.

Comparisons will be made as to the relative efficiency of this remedy in contrast with the other arsenic preparations—cacodylate of sodium and atoxyl—and also the injection methods of administering the mercury salts.

The readers of THE MEDICAL COUNCIL will be given a thorough treatment of the question of this new remedy, beginning with the next issue, by one of the leading syphilographers of the world, Professor Frederick R. Sturgis, of New York. In the meantime, rapid sifting of truth from error is being made daily, and the final results will be for the benefit of those practitioners who do not rush recklessly into methods not yet securely established.

Rational Steps in the Treatment of Locomotor Ataxia.

The curability of locomotor ataxia, we contend, is not any longer a debatable question; and our contentions are based solely upon clinical findings. Mark you, however, that we do not affirm that every case of progresive locomotor ataxia is curable, or, for that matter, that the majority of progressive cases are amenable to proper treatment.

These latter cases, all competent clinicians agree, are the exceptional rather than the predominant cases. Again, the essential lesion is purely *secondary*—a proverbially chronic meningitis, and a resultant degeneration in certain columns of nerve roots of the spinal cord. It is an old-time observation that common complications of locomotor ataxia have a graver prognosis than the disease itself.

Finally, the tabetic lesions naturally tend toward *resolution, arrest* and *regeneration*. The latter process is now conceded to embrace reparative work of a most remarkable character—the pushing out of new nerve fibers, along the old paths, where only recently was the destructive inflammatory exudate. It is this tendency that is in strong evidence in every-day clinical findings.

What remedies, or remedial procedure, will most help along this important reparative process? In other terms, what is the rational treatment of locomotor ataxia in the light of what we now know of this disease? No specific can be named, yet in the majority of cases some place must be given to drugs. As to procedure, no fast rule can be followed to uniform advantage.

We repeat, if possible, with yet greater emphasis than in our editorial in the January COUNCIL: "Locomotor ataxia is curable." *Merely enforcing good hygienic conditons is invariably superb treatment.* Such hygiene is the prerequisite to any and all plans of treatment and can be ensured only on condition of implicit obedience.

The practician in charge of a case of tabes must demand and receive militarv obedience from his patient—down to and including apparently puerile details—if he would succeed. This obedience must be strong enough to prevent the universal complications arising from the gratuitous medical advice poured into the patient's weary ears by *everybody*.

Of prime importance in any plan of rational treatment is systematic and efficient

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evacuation of the bladder and the colon. The victim must be strongly impressed with the common avenues of complications in these organs; and taught that his sense of feeling can no longer be relied upon as to when to evacuate nor when evacuations are adequate. He must use his eyes and his best discernment instead.

Given a normal urethra and bladder beyond mere paralysis of sensation, we must aim to keep them sound. This may be done by voiding the urine on strictly scheduled time—say every five to eight hours by day and more frequently at night. In the individual case one can soon establish a maximum which is never to be exceeded, all inclinations to the contrary notwithstanding. The patient must be taught how properly to judge of total daily voiding and to be assured that each voiding is complete.

If the large bowel is dead torpid, colon flushing at regular intervals will prevent piles and leakage, thus ensuring cleanliness and much comfort.

It is important that the nurse, or patient, or both, keep a close watch on *results*. Retention often ushers in trouble when it is least suspected. Repetition of the process, bowel kneading, the use occasionally of turpentine, etc., are helps. We recommend simply a warm salt solution—two or three quarts—made pleasantly soapy and administered with a fountain syringe.

If the stool shows a tendency to looseness we prescribe a few broken doses of calomel and repeat the flushing every second day till relief is assured. The squatting posture may be quite as needful in voiding the urine as at stool. To learn whether or no there is residual urine the patient need only express all he can immediately before injecting water for a colon flushing, then try again afterward. If results are negative trouble from ammoniacal urine need not be feared.

Colon flushings may be resorted to, as above indicated, for many years without the least danger, and with more comfort and satisfaction than from purgatives. We have records of its use extending over periods of seven to ten years and entailing from 8,000 to 15,000 flushings in different individuals. This method of bowel relief is very popular among the French-speaking people, who resort to it when the English would swallow pills, preferably "Little Devils."

With these two emunctories well cared for and the dietary reduced to meet properly the needs of the individual case, we deem the way cleared to determine the best drug treatment, with the same care as to individual needs. Graded doses of strychnia may prove the best remedy. In the syphilitic type, "606" is a drug well worth trying. But let it not evade our grasp that good hygiene, obedience, perseverance and good old-fashioned bitter tonics will often accomplish wonders.

The Extremes of Some Alienists and Psychologists.

We confess to a degree of mental perturbation over some of the rather frenzied writings of certain alienists and psychologists, and have been tempted to say something upon the subject. There has recently come to our desk the 1910 report of the Department for the Insane of Pennsylvania Hospital and we find therein our own ideas so well expressed that we quote therefrom as follows:

We have been disposed to adhere to a classification of forms or types of mental disease which have been in use in former reports and formerly in common use, the terms to be understood or accepted as groups of cases presenting prominent and uniform mental manifestations or symptoms. * * * It is true that many new terms have been introduced, drawn from the dead languages, which, while they have a suggestion of mystery and the glamour of novelty, in themselves are meaningless. They represent the longings of science rather than the results of new discoveries. The human brain continues much the same as it has been constituted for thousands of years and its abnormal manifestations have not changed. In the absence of new discoveries on which to found a new classification there has been an open and ample field for theorization and speculation which any one may enter, but the acceptance of the value of results must be tested by a general understanding and consent. * * The promoters of the new psychology have added immensely to the already over-loaded nomenclature. * * *

Perhaps much of the tendency to speculate about the operations of the human mind arises from an erroneous hypothesis that it is an entity or force, the nature of which can be discussed. We know abso-

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lutely nothing of it except of its manifestations, which for convenience we may call normal or abnormal. * * *

Until recent years mental pathology had a rational or somatic basis. * * * The case histories of all hospitals for the insane, taken at the admission of patients, show evidence of some change in the physical health. * * * It might be stated that ninety per cent. showed more or less deterioration of the physical condition and the existence of functional disorders. * * * If "a sound mind in a sound body" is a correct aphorism, the converse is equally true.

On the other hand, within recent years there has been a decided tendency to discuss the human mind as if it were a distinct entity that might be studied apart from its relations to the whole body as one of its organs, and to found a system of mental pathology wholly upon a psychic basis. It has its promoters among alienists; and the advocate of the "new thought" (whatever that may be), those who would establish so-called mental clinics; those who would practically substitute largely treatment by suggestion, hypnotism, and moral means for hospital treatment. * * * It is to be hoped that, in the contention between the doctrinaires who espouse the somatic or psychic theory of insanity, some advantage may yet come to the insane and even their medical and moral treatment be not wholly overlooked.

The promotion of these fanciful diversions by some of the alienists is what brings them into disrepute before juries and courts and, in the opinion of many, is conducive to endless complication in a field with which many general practicians must keep themselves in touch. Such complication is a disaster to science.

In the field of neurology things are not much better. A few years since a book was published purporting to be a clinical treatise upon nervous diseases. Examination showed it to be given up (all but nine pages) to an ultrascientific discussion of the neurones. This is an extreme instance, but in examining the recent text books upon neurology, all too many of them are given over to the fanciful or the half-proven. One of them practically ignores infections and hemorrhagic nerve-tissue lesions, but gives large space to neuron diseases. Another practically ignores functional nervous diseases. The ordinary medical reader is dazed and never goes fifty pages into these books.

The specialist in other branches of medicine is simplifying his specialty and is adding greatly to general medical knowledge. A few of the neurologists are doing so, but they are *very* few. Actually one can get more out of the older books of Gowers, Mills, Strümpell and others than he can from the average modern work upon neurology. The newer tendencies in neurology are leading nowhere and to "No man's land."

As a plain matter of fact, syphilis and tuberculosis, high living, the pressure of business and worries, various infections, tobacco and alcohol are the things that are of greater importance in neurology than are the moonshine of psychologic disturbances and even the diseases of the neurones.

It will be a cause of real regret if the general practician is forced to give over to the perfervid specialist the care of the average nervous case in his practice. We have been recently talking with a physician who has charge of the neurologic clinic in a large hospital. He informs us that seventy-five per cent. of the cases sent to his clinic by physicians are found to have undiscovered lesions or functional disorders not nervous and that his chief work consists in sorting out the "nervous cases" and determining where they belong. If such conditions prevail in many clinics it would appear that general practicians usually do not sufficiently study their "nervous cases."

There is one very good reason why we should be able to reach higher or see farther in scientific achievements than our forefathers in medicine—we are standing on their shoulders. If we do not do our share to advance the cause of medical science for the benefit of humanity, we would just as well not have entered the profession.

It is important that any subscriber who changes his location should at once notify us of his change, giving his old address also, so as not to miss any numbers of THE COUNCIL.

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Wounds of the Scalp Involving the Pericranium.

In case of any violence to the scalp resulting in a deep wound, the question of fracture at once presents itself, and the mistake is common in thinking a slit of the pericranium to be a fracture. Only exploration, preferably with the finger, will reveal the condition, and it is extremely important that accurate information be at once obtained.

All practitioners know how readily will the average scalp wound heal, but we desire to express a warning as regards deep wounds. Probably all scalp wounds are more or less infected, and in superficial wounds this is seldom dangerous. While there are few glands upon the scalp, the lymphatics are abundant, and may be a source of danger if the infection be serious. The hair follicles cannot be rendered sterile, and it is difficult to shave closely over the wrinkles or folds of the scalp. A thorough scrubbing and disinfection of deep wounds is often difficult without removing fragments of tissues torn but adherent, and making a thorough search for foreign bodies and fragments of hair or clothing carried into the wound and clots of blood often found beneath the tissues. More especially if the subaponeurotic tissues are involved in the lesion is a thorough cleansing necessary, since serious infection spreads rapidly through the tissues.

If the pericranium is cut through, a thorough surgical technic is necessary to the safe closing of the wound. Picking up and suturing the cut or torn pericranium is not so readily done as it sounds, and it is better to leave it alone rather than to risk infection of the tissue itself or of the denuded bone underneath. Such infection may result in osteomyelitis, or the germs may invade the diploë and traverse the vessels thereof to the intracranial sinuses or even reach the cerebrospinal fluid.

A subpericranial abscess forunately invades only one bone, due to the pericranial attachments at the sutures. Nevertheless, this is a sufficiently serious matter to cause the average surgeon to pause before undertaking the surgery of the pericranium. General anesthesia is necessary for this work, and it were better to treat deep injuries of the scalp involving the pericranium as open wounds rather than close up a poorly sutured or imperfectly sterilized wound. In a hospital or with an experienced surgeon the wound may be closed with comparative safety, but it takes considerable experience to judge what would should or should not be closed.

Suturing wounds of the scalp, especially when upon the forehead, should be very neatly done, using the interrupted suture with the knots tied over one of the suture or needle holes. It is seldom proper to allow the sutures to remain long in situ, it being often well to remove them within twenty-four hours.

In general, it must be said that the general practitioner should not undertake the treatment of these cases unless he has had considerable surgical experience, or is in position to watch the case most carefully. Few of the text-books sufficiently emphasize the dangers of these cases; few doctors have witnessed the rapid spread of infection when it occurs in wounds of the pericranium, and we take this occasion to warn against all but the most thorough technic when such cases come into your hands.

Local Anesthesia of the Rectum.

The following formula is a classic one for itching hemorrhoids: Pulv. gallae, gr. v; pulv. opii, gr. x; cocaine hydrochlor., gr. xv; ung. hydrargyri, drachms ii; cerat, simp., drachms vi.-M. ft. ung. et sig. Rub well into parts on going to bed. This formula was prescribed for a business man working under great pressure and having a small amount of sugar in his urine. He applied it very freely the first night, and an hour later was in an alarming state of coma. Recovery was slow but complete. This is but one instance of several coming to our attention of the danger of applications of cocaine to the rectum for other than surgical purposes. So well is this understood by specialists in rectal troubles that they seldom put cocaine in the hands of the patient, prescribing orthoform or analgine where an anesthetic effect is desired. Orthoform is very slightly toxic, but applications of the pure powder to an excoriated surface may result in gangrene. Ointments of from 10 to 20 per cent. may be applied to the rectum. Analgine may be prescribed in the form of 5 gr. rectal suppositories. When such local applications do not relieve, the case usually requires more than mere palliation, and it is not considered wise to use cocaine as a routine measure.

While it is entirely proper to avoid general anesthesia in the smaller operations upon

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the rectum, yet it must not be forgotten that cocaine in any form is frequently contraindicated. In all forms and degrees of tuberculosis, in other severe pulmonary lesions, in nephritis and in heart affections, this drug is apt to be either harmful or dangerous. But in the great run of minor rectal operations cocaine may be advantageously and safely employed and saves time and avoids pain. Recent literature shows that the combination of cocaine with morphine or adrenalin is losing favor. Indeed, some claim that morphine is incompatible with cocaine, and that the combination with adrenalin may result in secondary hemorrhage in rectal operations. In other directions this combination has found much favor. When merely applied to the unbroken skin, or mucous membrane, cocaine may be used in 5 per cent. strength; but operative work is more satisfactorily done by injecting a solution of one-quarter per cent. by the infiltration method. Few specialists in this work use stronger than one per cent. solutions when injecting them into the tissues.

The infiltration method has shown that mere pressure has so much to do with the anesthesia induced that in purely *operative work* injections of sterile water alone are used with success. Especially is this the case in operating upon hemorrhoids. There is a marked lack of hemorrhage when operating upon this condition after the injection of sterile water or a weak infiltrating cocaine solution. So fully has local anesthesia simplified rectal work that the older methods of phenol injections and other caustic applications are giving way to clean cut surgery almost exclusively.

Distention of the Infantile Rectum.

We have recently encountered a case of marked constipation in a child of 7 years, and in which the mother gave daily rectal flushings, using therefor a powerful syringe. The nozzle of the syringe becoming somewhat loose, became detached and passed into the lower bowel quite beyond reach. A proper dose of oil soon dislodged the rubber 2½-inch nozzle, and it was discharged in reversed position. Examination revealed a rectum relaxed and very greatly distended. Upon several occasions we have found the rectum tissues of infants relaxed, distended, or even diseased by the daily flushing often carelessly or violently administered.

During fetal life there are communications of the hind-gut with the allantois and the neurenteric canal, and, somewhat later, the bowel and the genito-urinary canal form a common passage or opening, but the proctodeum and other folds of the tissues result in closure when the development is complete. But more or less lack of development is rather common, resulting in congenital malformations, such as imperforate anus, absent rectum, imperforate rectum and various atresias.

From our own experience with these conditions, we are led to the view that nature leaves a weak place here, such as is instanced in the inguinal canal, much more frequently than is commonly supposed to be the case. At all events, there is so frequently a more or less developed lesion of some sort in the infantile rectum that it impresses us as unwise to allow an inexperienced mother or child nurse to regularly use rectal flushings upon their little charges.

Diphtheria and Its Treatment.

It has been our pleasure to attend several County Medical Society meetings, and we find diphtheria, typhoid and pneumonia the three principal texts for discussion. It has impressed us that there must be sufficient difficulty in the treatment of these three diseases as to make them a "thorn in the flesh" of the rank and file of doctors. When one reads the text books of the principal authorities, little is said about the treatment of diphtheria except how and when to use antitoxin. But when one attends the sessions of the medical societies he hears exploited everything ever used in the treatment of this disease.

We have recently heard favorably mentioned hydrogen peroxide, calomel, red iodide of mercury, bichloride combined with the tr. of iron chloride, ammonium chloride and bichloride of mercury, the cyanides, alcohol and various stimulants and antiseptics. All of these recommendations were made by men of large reported experience.

We confess to some degree of amazement in hearing these reports and con-

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cluded that either the gentlemen were using inadequate doses of antitoxin or were giving them too late. One reader of a paper claimed that the State Department of Health did not supply an adequate amount for a severe case.

And yet no less an authority than Szontagh, in the *Jahrbuch fur Kindderhk,* has recently said:

"Owing to certain theoretical considerations, the author regards with considerable skepticism the sanguine claims of the original investigators in this field. It was not until he had observed the action of the serum in a case of malignant diphtheria that he became convinced of the beneficial effects of this method of treatment. The results of subsequent clinical investigation led the author to the conclusion that the most potent and direct effect of the serum is on the local focus of infection, and not on the general condition. In fact, the author is inclined to deny any great importance to the toxin-neutralizing action of the serum.

"Likewise, he thinks that it has but slight influence in the prevention or cure of diphtheritic paralysis. In the author's extensive experience (over 1000 cases) malignant cases of diphtheria are absolutely resistant to the action of the serum, even when it is administered in very large doses very early in the course of the disease. In these cases the fatal result is often incorrectly attributed to a mixed infection. Just why certain cases are uninfluenced by the antitoxin serum it is difficult to say; perhaps it is due to an inherited disposition. When diphtheria is associated or complicated with tuberculosis, the serum seems to have no effect whatever upon the course of the disease. The beneficial local action of the antitoxin serum is generally more marked in tonsillar and pharyngeal than in laryngeal diphtheria."

We are not prepared to endorse all of these statements, but we can consistently record the fact that many general practicians and some investigators are trying to arrive at more consistent and direct indications for the initial use of antitoxin, its limitations, its proper dose and what auxiliary treatment should go with the serum itself.

Local Throat Treatment.

In no other region of the human body is there greater demand for local treatment than in the oral cavity. This constant demand is owing largely to the vital relation of the mouth to the two great functions of life—alimentation and respiration—both dealing with carriers of disease germs.

In no other of the cavities of the body is there such opportunity to employ fine skill with superfine effect as in the oropharynx. Besides the frequent call for effective treatment in the parts harboring disease, there is a psychological demand it is imprudent to ignore. The patient—if he possesses a mature mind—and his meddlesome friends require that there be some local treatment of every sore throat. It were better to meet this psychological indication, though the results of such treatment be negative, than to complicate the disease with discontent of mind in patient or friends.

A well pleased mind goes far toward whetting to a keen edge the anti-bodies, without which an infection cannot be thrown off. Therefore, we recommend in every case of sore throat, not merely some form of good treatment, but, as a fast working rule, the *very best* form for the individual case. Simply resorting to good approved treatment rapidly leads to a routine practice that is worthless, apart from the mere mental effect, four times in five.

The time-honored gargle is purely of this latter class. In children and young nervous persons it is plainly not applicable. In adults who have not been taught how to manipulate, the gargle cannot be depended upon to carry the medicament into the oropharynx. As a plan of treatment a well made throat lozenge is more generally useful than the gargle.

But the scheme of greatest and surest value is always that which carries the remedy to the diseased surface under the operator's eye, such as sprays, swabs, etc. Employed gently, even nervous young women take kindly to the treatment and often the nurse or mother may be taught to make applications in the absence of the physician.

A good point in general practice is to make little, or no, use of a tongue depressor. Simply have the patient open his mouth widely and inhale deeply. Thus we secure the fullest view of the oropharynx.

Another good point is to make sure by actual test that the remedy employed is capable of doing what is expected, in a harmless manner.

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Hints On Digestive Disorders.

HYPOCHLORHYDRIA.—In low acidity, or achylia, our remedy of first importance is H. C. L., given before, during or after meals. It causes an increase in the acid and pepsin secreted, or their reappearance where previously absent. Nux vomica has greatest value when there is gastric atonony. Electricity, employed in the form of the faradic current introgastrically, is recommended. Other remedies are aloes and podophyllin, said to improve the motility of the stomach. When gaseous fermentation calls for treatment, salicylic acid, 1-2000, gives the best results. In the matter of diet, modern research proves that the carbohydrates should predominate, because they excite the largest quantity of I. and C. L. and unite with the least of it.

HYPERCHLORHYDRIA.—Gastric acidity and gastric motility are interdependent features of normal digestion. If H. C. L. is deficient or absent the contents of the stomach is expelled slowly. Rhythmic contraction and relaxation of the pylorus takes place with difficulty, if not painfully. When the patient is in a recumbent position the motility of the stomach is naturally the stronger, and when he lies on the right side about half an hour after meals there is a considerable gain in the time required by the food to pass through the stomach. In the diet treatment of excessive acidity protein and fat should predominate. The former excites a liberal flow of gastric juice but freely unites with it, while the latter promotes little or no flow—perhaps retards the flow. Protein mixed with fat excites less acid than protein alone.

THE PSYCHIC ELEMENT. — Authorities may, and do, disagree as to whether or no hyperchlorhydria is essentially a neurosis of the stomach. All agree that a psychic element is frequently operative and that all neurotics are at times hyperchlorhydriac. The business man under special strain, the student facing a final examination, women under great grief and neurasthenic patients, are its victims. Here the application of proper dietetic measures and drugs to restrain excessive secretion is, of course, necessary, but in addition there is a psychic element to consider, and until it is catered to we often fail to cure. So a sea voyage, or a complete change of environment is very important. Nux vomica should be given, as well as other toncs, on account of their effects upon the nerves and the part they play in improving the general condition. We have to pay attention not only to the stomach chemistry, but also to the condition of general strength of the patient, and particularly the condition of the nerve tone.

"PAINS OF HUNGER."—Perhaps the most characteristic symptom of gastric hyperacidity is the gnawing pain so wrongly attributed by the patient and the old-time family doctor to hunger. Undoubtedly it is the most deceptive of all purely gastric symptoms, since it appears from two to four hours after meals, and is relieved by protein food, such as the white of a raw egg. The pain is caused by free acid and yields when this unites with the protein. Similar temporary relief follows drinking a cup of milk by sips. When drinking rapidly the dense curd formed is apt to aggravate the condition. For obvious reasons a glass of water or a liberal quantity of soda affords relief, but neither of the articles named will cure. Vomiting and lavage also give only temporary relief from the acute distress. The record of some of these results in a patient's history is valuable in the diagnosis.

APPENDICULAR GASTRALGIA. — Surgeons who have excised the largest number of appendices have been attracted most frequently by the appearance in the accompanying histories of a gastric feature which yielded to the operation. Hence the recognition of chronic appendicitis or irritation as a by no means uncommon cause of gastric hypersecretion. The clinical phenomenon is sufficiently characteristic to make a snap diagnosis possible at times. As a rule, it displays an intermittent character for several years, and each fresh attack is ascribed by the patient either to a chill, mental anxiety, or to some indiscretion of diet. For a considerable time after it has attained the chronic stage the typical symptoms of a moderate hypersecretion continue to manifest themselves, but with the progress of time the paroxysmal pain is gradually replaced by discomfort and distension, which persist during the entire day. The appendix is in a condition of active irritation, such as ensues from ulceration of its mucous membrane, the presence of a large calculus, or extreme cystic dilatation of its lumen. Pain is always a noticeable feature, and a gastric analysis shows hyperacidity. It is a good rule when the

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latter is found always to examine the appendix.

INTESTINAL INDIGESTION, DIET. — The most valuable hints for the treatment of intestinal indigestion are derived from the study of the feces and the test of hepatic and pancreatic efficiency. If the patient is making a good use of starches and sugars, while fats are fairly well digested, the indications are clearly to cut proteins to a minimum, make cereals and other starches the main reliance, and supply assimilable fats guardedly. It will not do to exclude proteins from the diet entirely, for these patients are often losing weight, and without proteins in the food they will consume the body's own proteins and continue losing weight. A little lean meat once a day, or milk, or vegetables rich in protein may be allowed. The weight must increase if improvement is to take place, and the patient should have a special suit of clothes and a particular day of the week and hour of the day for taking his weight, always on the same scales. It is also absolutely necessary to supply ferments; otherwise even the small amount of protein allowed will putrefy and delay improvement. All the strong proteolytic ferments have a pronounced action on milk and upon proteins of vegetable origin.

INTESTINAL INDIGESTION, DRUGS.—In intestinal indigestion the main indications for drugs are (1) to keep the alimentary canal therapeautically clean, (2) to stimulate the liver, (3) to supply ferments and (4) to tone up the system generally.

Fermented milks are on the border line between food and drugs, for they are supposed to nourish and at the same time to aid in disinfecting the intestine. In such fermented milk the casein is already converted (to about 50 per cent.) into peptone and albumose; lactic acid is about 1.0 or 1.2 per cent.; calcium phosphate is in an easily absorbed form, and they are particularly useful when the stomach is also deranged, as in anorexia nervosa, and subacute gastritis. Gout and arteriorsclerosis are often associated with intestinal putrefaction, and for these conditions the fermented milks are especially useful.

Buttermilk is an excellent article of diet, and may be taken *ad libitum*.

Doctor, you don't want us to feel uncertain about your renewal, do you? Send it in right away and get it off your mind.

Systemic Conditions Affecting the Eyes.

It was our pleasure, at a recent meeting of the Philadelphia County Medical Society, to take note of a new kind of specialism—founded upon a thorough study of the entire system. It is too often the case that physicians treat the particular local organ which is supposed to be out of order and disregard the errors of the system that are causing the trouble. This particular meeting of the Society was devoted to certain diseases of the eye, participated in by Drs. S. Lewis Ziegler, J. Milton Griscom, G. E. de Schweinitz and William Zentmayer, reading the principal papers, with subsequent discussion by Drs. Wendell Reber, Samuel D. Risley and others—all well known for the work they have done in advancing our knowledge of diseases of the eye. The keynote, which was struck first by Dr. Ziegler and afterwards reiterated by most of the others, was the importance of auto-intoxication as a cause of many of the serious and baffling diseased conditions of the eye. Case after case was reported in which the general practician, in whose hands the case first came, foolishly overlooked such a simple matter as obstinate and chronic locking up of the bowels, and the consequent poisoning to which the system was thus subjected. In these cases, the diseased conditions which had resisted local applications and even operations, yielded readily to a simple course of intestinal evacuation and antisepsis. We wish that every general practician in the United States could have been present at the meeting. They might have seen the reason why they are compelled, day after day, either to refer to specialists cases of diseased conditions of various local organs or to let the patient suffer without relief, when they might solve the problem by putting, as far as possible, every eliminating organ into normal working condition, and keeping it so, thus relieving the patient of any of the various forms of self-poisoning and allowing the local condition to recover by nature's well-known conservative efforts.

Moral: Go over the entire system carefully, again and again, before you conclude that a diseased condition is strictly local. Don't spray, cauterize or cut when you would better cure constipation and secure more perfect diuresis, diaphoresis and assimilation.

See the paper on "Auto-Intoxication" in this issue.

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A Question of Finance

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In this connection, Doctor, please observe by the standing notice on the title page and on the first editorial page, that the subscrpition price of THE MEDICAL COUNCIL is $1 50 per year, but that we square the account at only $1.00 if paid **in advance.** Also, that you can still further save money—as well as the trouble and expense of frequent remittances—by sending **$3.00 for four years.**

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Original Articles

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Sentences, like sunbeams, burn deepest when most condensed.

Report of Two Cases of Syphilis Treated with Salvarsan (606).

By LEO HÜTH, M.D.,
Follansbee, W. Va.

Case 1.—An Austrian, aged 28, fireman in boiler house, had syphilis in secondary stage characterized by glandular and nodular swelling of glands in throat, with a swollen condition of the muscles of throat, mucous patches in mouth and on the tongue. Patient could only eat very soft foods, and then with much pain on swallowing.

January 2, 1911, I gave him an injection of 606 (salvarsan) between shoulder blades in a downward direction; afterward applied moist sterile dressing. Twenty-four hours later I saw the patient, who complained of pain in the muscles of back, could not sleep, and was very nervous, but no abnormal temperature. Forty-eight hours later I saw him and found muscles of neck soft, with inflammation, mucous patches and enlarged glands all healed and had disappeared, and on the fourth day after injection I examined him very carefully and found no evidence of syphilis. I would say that on the morning of the fifth day I found patient eating sour pickles and pork chops for breakfast, something which he could not eat for many months before. This man eats now anything he wants without discomfort and is back at his work, while he tells me that he feels like a new man, and I am sure that, so far that lies in my power, I can say that he is cured of syphilis.

Case 2.—Italian, aged 30, tailor, had syphilis in secondary stage, with mucous patches in mouth, in throat and tongue, also enlarged glands about throat, under jaw and elbow, with non-suppurating syphilitic bubo on each side.

January 3 I injected 606 (salvarsan) into gluteal muscles. I saw him next day and found mucous patches all healed, with buboes and other enlarged glands perceptibly smaller; but he complained of great pain in the hip and thighs; in fact, he could not

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move without a great deal of pain. His temperature 24 hours after injection rose to 102.5, but on the following day subsided on taking a saline.

Seven days after injection the patient went back to work at his usual vocation. pain and soreness, with all evidences of syphilis, healed and disappeared. The patient said he felt better now than at any time in his life. He is able to eat anything without pain now, while previously to injection he ate soft foods principally.

From my experiences so far with salvarsan I find that it has done all that is claimed for it, and more. If the danger to life could be avoided, or if a standard solution could be prepared ready for use, it would facilitate matters very much.

I am treating now with this remedy several cases of tertiary syphilis, with large sloughing ulcers of legs, and in one case it has attacked the bones of the lower jaw, and I hope to send you the result by the end of the month.

The Administration of Salvarsan—"606." A Warning.

To the Medical Council:

Realizing that some one should sound a note of warning against the reckless or unskillful use of this remedy, I feel that I am doing my fellow practitioners a kindness to open their eyes, as mine have been opened, regarding the proper technic which is necessary in the administration of Ehrlich's wonderful preparation if one is to expect success from its use.

I confess that, before taking up the matter from the standpoint of an investigator and a user of this remedy, I was under the impression, from what I could gather from the medical journals, that the injection was a simple procedure—a patient could call at the office, a diagnosis be made and a dose of "Salvarsan" could be administered with the assurance that he could return home a cured man.

Desiring to use it myself, I made inquiries from those whose articles I had read, and each reply contained the advice not to attempt its use from any printed directions, but to first go where I could witness the process and study the technic from an experienced operator.

Acting upon this advice, I went to Philadelphia. Having an introduction to Dr. Judson Daland, professor of clinical medicine in the Medico-Chirurgical College, I gladly availed myself of the opportunity to study under him, one of the sixteen physicians in North America to whom Prof. Ehrlich had intrusted the experimental tests of his new remedy.

As a part of his preparation for this work, Dr. Daland spent several months last summer in the Wechselmann laboratory and clinic in Germany, and a more competent instructor it has seldom been my pleasure to listen to.

After a careful study of the preparation and administration I say, unhesitatingly, that, had I attempted the use of Salvarsan before being taught by Dr. Daland, my patients would have paid for my ignorance with their lives or long weeks or months of a serious illness. I would have soon abandoned the use of the drug and should have probably never attempted it again.

Quite to the contrary, I am convinced, by the results obtained by Dr. Daland and others, that Salvarsan is the greatest addition to the spyhilographer's armamentarium that science has made since the acceptation of the law of Moses that "the sins of the father are visited upon the children, even unto the third and fourth generations."

There have been not only serious results, but still worse, there have been fatalities, due solely to faulty technic in the administration of this drug. In view of these facts, is it expedient for the physician who has no hospital facilities at his disposal to take this risk? And in view of the further facts that it is mandatory that the patient be immediately put to bed, for at least forty-eight hours, under the watchful care of a trained attendant, are we who have not these facilities justified in treating our patient with this remedy?

In conclusion, I desire to state that it is the expressed opinion of all specialists with whom I have conversed, that the general practitioner must either rest content to wait until skillful operators, scientific investigators and trained specialists have worked out a perfect technic and a minimum and maximum dose, or go where they can see these men operate and there acquire the necessary knowledge before administering Salvarsan to a patient.

Francis Phillips, M.D.

Quincy, Fla.

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Auto-Intoxication.

By C. M. RICKERT, M.D.,
Harrisburg, Pa.

The graduate in medicine of to-day is so well equipped that he is able almost at a glance to detect the slightest variations from the normal of the different functions of the body. Faulty metabolism and pathological conditions should be very evident to him on account of the thorough practical laboratory training. The older practitioners learned most of such work through years of experience, and many conditions which now seem commonplace were rare and almost inexplicable not many years ago. There is one condition which is responsible for a large part of the ills flesh is heir to, and which to-day is fairly well understood. It is auto-intoxication. I would respectfully ask the young man to carefully examine any case that is the least bit obscure, for this condition simulates a variety of diseases. It may mean much to his patient and more to his own reputation. I will cite two cases which were attended by men of established reputation, and thereby show how easily one may overlook the cause.

Case No. 1.

A prominent business man, aged 45 years, good habits, a great traveler. He was taken ill with acute indigestion, followed by a slight diarrhea. He summoned the family physician, who diagnosed the condition as indigestion, prescribing a mild purgative. The diarrhea became worse, it being accompanied with a great deal of pain. An opiate, with bismuth subnit., was prescribed, with very little effect. After a week there was general malaise, temperature 105 2-5 degrees, with some typhoid symptoms. I was called in to see the patient, being advised to look for typhoid fever. After a thorough examination I diagnosed the trouble as one of auto-intoxication. I prescribed small doses of calomel, ipecac and podophyllin for twelve hours, following with a high enema of three quarts of hot linseed tea. The patient voided some of the most offensive fecal matter imaginable during the next twenty-four hours. Temperature dropped to normal, all malaise and typhoid symptoms disappeared, and the patient promptly recovered with very little medication but to keep bowels clean and aseptic.

Case No. 2.

Married woman, aged 42, invalid for several years from constipation and severe attacks of vomiting. On account of this vomiting and disgust for food she was very much emaciated, her general appearance being such as is only found in malignant disease. Her physician had tried various remedial agents, but nothing seemed to overcome the constipation and attacks of vomiting. I was called in to see the case on account of my special work in rectal diseases. Upon examination I found a complete stricture about three inches within the anus, leaving only enough space for the passage of liquid feces. I also found fecal matter in the sigmoid and lower colon. Her weakened condition contraindicated any operative procedure under an anesthetic, so I decided to slowly dilate the stricture with small bougies. After several trials I was rewarded by the passage of a small Wales bougie. Keeping this up for several days I was able to wash out the bowel and remove several quarts of impacted feces. After several months I was able to introduce a No. 9 Wales bougie, and her bowels were in better condition than they had been in ten years. There are at present no more attacks of vomiting, no chills and fever, which were attributed to some malarial poison, but which were, in fact, all due to retained feces.

718 North Sixth street.

Iron Hypodermically.

By R. M. NILES, M.D.,
Nicholson, Pa.

Digestive disturbance has ever been the *"bete noir"* to the exhibition of iron.

Ferruginous preparations frequently are not assimiliated in the very cases where they are most needed. The various anemias and anemic conditions are so often associated with a concomitant gastro-intestinal catarrh that chalybeates are interdicted and, if administered, are followed by an aggravation of conditions conducive to the very affection whose amelioration and cure is the *sine qua non* of medication.

In January, 1902, I was attending a case of marked anemia following an attack of la grippe Practically all of the mucous membranes were catarrhally inflamed—stomach, intestines, bladder, nose, ears, etc. There was a unilateral pleural effusion, also

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effusion in both knee joints. The case was desperate. But little food and practically no medicine could be retained. After meeting several very able consultants and one osteopath I attempted the hypodermic use of iron. The results were most satisfactory. The patient made a complete recovery and has remained well to the present time, notwithstanding the fact that she is frail (weight, 97 pounds), has overworked and been subjected to much nervous strain.

I also have at hand records of several cases of neurasthenia, anemia following septic abortion, chronic appendicitis, chlorosis, etc. In every case where iron was administered hypodermically the results were much more brilliant than experience had taught me to look for when iron was administered *per os*.

The Technic.

The solution is prepared by adding 2 grams ferri et ammonii citras to 8 c.c. of boiling distilled water in a sterile vial. The solution is corked with a sterile stopper and heated in a water bath each time before using. From 2 to 8 m. of the solution are used for a single injection. The injection is made deeply into the muscular tissue of the thigh, shoulder or arm, care being taken to have the skin, as well as the syringe and needle, surgically clean.

Slight pain is experienced at the time of injection. But little local reaction takes place. Later a hard nodule may be felt at the site of injection, which soon disappears.

In the case cited 149 daily injections were made. In less urgent cases the interval may be lengthened.

In one case weekly injections—covering two months—were given. Marked improvement was noted. The doses in this case were relatively large (10 m.), were quite painful and followed by a correspondingly greater local reaction, though not sufficient to require treatment other than hot compresses applied by the patient herself.

In this article the writer has been brief, as his object was more to stimulate interest in this most efficient method of introducing iron into the economy than to weary the reader with a tiresome technical recitation of case histories, blood counts and hemoglobin estimates. For further literature the reader is referred to Rosenthal, Magagni, Da Costa, Rummo, Dori, Shoemaker.

Vaccine Therapy in General Practice.

By G. H. Sherman, M.D.,
Detroit, Mich.

Immunization against pathogenic bacteria and how to attain it is the most important factor in treating infectious diseases. When an infection exists it is evident that the individual is not immune to the invading organism. The existence of an infection can only be accounted for on the ground that the defense organs have not been stimulated sufficiently by substances produced and absorbed from the infected area to bring about immunity. During acute progressive infections toxic materials are formed which have a depressing effect on the nervous system. Some contend that it is these toxic materials that stimulate the immunizing mechanism to bring about an immunity. If this contention were correct, the time would come in the course of all acute infections when the defense organs would be stimulated enough to bring about an immunity; but in many cases, instead of the patient becoming immune, he dies from toxemia. From this it must be clear that it is not the toxic material, but some other substances formed during the progress of an infection, that stimulate the defense organs for immunizing purposes.

It is quite probable that the inflammation produced by the irritating effect of the toxic material in the infected area retards or hinders the absorption of the non-toxic materials which stimulate the immunizing mechanism.

As a natural consequence the infection continues to spread in these cases. This condition is particularly often met with in streptococcus infections. Obviously the essential element in treating these cases is to arouse the immunizing mechanism into activity. Here is where therapeutic inoculations of sterile bacterial emulsions (bacterial vaccines), as advocated by Wright, are of inestimable value. Any one who has had extensive experience in treating these cases with bacterial vaccines cannot help being forcibly impressed with the marvelous results obtained. The principle of this treatment consists in injecting under the skin killed bacteria of the same kind causing the infection, in sufficient number to stimulate the defense organs for the production of immunizing substances.

The probable reason why these vaccines

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stimulate the defense organs is because, the germs being dead, not enough inflammation is produced at the point of inoculation to prevent the absorption of the substances necessary to bring about an immunity.

In treating infections with bacterial vaccines it is essential that the treatment should be started early in the course of the disease. If treatment is delayed, enough toxic material may be absorbed to dangerously depress the patient and also interfere with the immunizing response of the vaccine.

When we consider that most ailments we are called to treat are caused by some germ, the tremendous scope of this method of treatment can be realized. In this connection it is also essential to note that most diseased conditions met with in every day practice are caused by a small group of germs, the so-called "pus group," streptococci, staphylococci, pneumococci, colon bacilli and gonococci. Any one of these may cause a large variety of diseases.

Thus the streptococcus may infect various parts of the body, causing tonsilitis, bronchitis, otitis media, mastoiditis, articular rheumatism, infected wounds, puerperal fever, septicemia, erysipelas, etc. Very often we find a mixed infection of two or more of these organisms. This is particularly the case in infective processes of the respiratory tract. Drugs, in the treatment of these infective processes, admittedly have but little, if any, curative value. They simply give relief while nature effects a cure. With these vaccines nature's methods of effecting a cure is aided.

The question of the advantage of autogenous as compared with stock vaccines has received considerable consideration. I have used many autogenous vaccines, but have had a much more extensive experience with stock vaccines, having used over five thousand doses during the last four years.

My impression is that most of those advocating autogenous vaccines have been working principally with subacute and chronic infections, where the infecting organism can be readily procured. The necessary time required to make an autogenous vaccine would unduly delay treatment in acute infections. In many infections the infecting organism cannot be procured to make an autogenous vaccine. Often the facilities for making autogenous vaccine are not at hand. From a careful consideration of this subject it appears that, for the practical application of the vaccine treatment in general practice, stock vaccines should be used, and autogenous vaccines made in cases of subacute and chronic infections, where an unusual organism is found and where stock vaccines have not given the desired results.

Ordinarily a diagnosis to indicate what vaccine should be used can be made from clinical symptoms. Thus in erysipelas we have the streptococcus erysipelatis, in pneumonia the pneumococcus, in follicular tonsilitis and scarlet fever the streptococcus, in broncho-pneumonia otitis media and laryngitis, pneumococci or streptococci and more often a mixed infection of both organisms. Staphylococci are often found in these conditions. In appendicitis the colon bacillus is practically always found and often associated with streptococci or pneumococci. Where we have infections from abrasions of the skin, staphylococci, streptococci or a mixture of these organisms are found. In case the infection has a tendency to spread and run along lymphatic channels, leaving red chains, it may safely be considered streptococcic. Where the inflammation remains around the point of original infection, it is liable to be staphyloccic. Furuncles and boils are caused by staphylococci. In puerperal fever streptococcus infection is to be guarded against. When there are indications of mixed infections being present, mixed vaccines, corresponding to the various organisms suspected, should be given. If no infection should exist corresponding to some of the vaccine that has been given, not only no harm has been done, but the patient is benefited, inasmuch as he is being guarded against other ever-present organisms.

By using bacterial vaccines as indicated by clinical symptoms, in many instances the patient is on the way to recovery before an exact diagnosis by bacterial examination could be made.

Taking the opsonic index as a guide to administer the vaccine is now quite generally regarded as not necessary, clinical symptoms being considered just as reliable.

From extensive experience the proper dose and interval between inoculations is being nicely worked out. As a general rule the dose should be repeated at shorter intervals in acute than in subacute or chronic infections. In the early stages of severe acute infections the dose may be repeated in 12 or 24 hours. When conditions improve the interval between inoculations should be extended to 2 or 3 days. In sub-

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acute and chronic infections inoculations should be made at from 4- to 10-day intervals.

I have used bacterial vaccines extensively in acute infections of the respiratory tract, or what is ordinarily known as having a "bad cold." These infections usually extend from the nose down the pharynx and into the larynx, and often down into the bronchi. From the throat they frequently extend to the middle ear and mastoid cells.

In these cases streptococci and pneumococci or a mixed infection of the two organisms are most frequently found. Staphylococci are also quite frequently met with and no doubt are a factor in the infective process. Repeated bacterial examinations in these cases show that streptococci and pneumococci are generally found in the throat, but not often in the nose. Here staphylococci and other organisms are frequently met with. Any one wishing to convince himself of the therapeutic value of the vaccine treatment can do no better than to use them as a routine in these cases. In "colds" I have obtained the best results with a mixed vaccine streptococci 30,000,000, pneumococci 40,000,000 and staphylococci 150,000,000, or a streptococcus and pneumococcus combination. Usually in one day after the first inoculation the patient is better. If the infection has extended into the lungs, causing a broncho-pneumonia, the same combination should be used, and repeated the next day if no material improvement should be observed by that time. Improvement in these cases may be confidently looked for in from 1 to 2 days, and in many instances the course of the disease is entirely aborted, recovery taking place at once.

In lobar pneumonia I have had the best results with a pneumococcus and streptococcus combination vaccine, pneumococci 30,000,000, streptococci 20,000,000, repeated at 1- to 2-day intervals. In bad cases the dose may be repeated in 12 hours. To get the best results it should be given early; preferably when the attending physician makes his first call after the patient has had the characteristic chill followed by fever with pain in the lung. In these cases the results are often positively spectacular, the course of the disease being entirely broken up and the patient recovering in a few days.

Inflammatory rheumatism is now generally regarded as an infectious disease. The results obtained in this disease with streptococcus vaccine can no longer be questioned. In the early acute stage I generally expect relief from pain about 18 hours after the first inoculation, with the general condition of the patient improving. New joints may become involved after treatment is started, but the inflammation will be not so severe and of shorter duration. Subacute and chronic rheumatism also respond nicely to the vaccine treatment. One noteworthy advantage of the vaccine treatment in rheumatism is that relapses do not occur often after recovery takes place.

In infected wounds from abrasions of the skin, streptococcus and staphylococcus combination vaccine should be given at once. In this way the infective process will be aborted and complications avoided.

In midwifery some physicians use streptococcus vaccine as a prophylactor to guard against subsequent infection, especially in instrumental cases. All cases of perineum lacerations should be given a dose of colon bacillus and streptococcus combination vaccine to guard against infection and thus aid in procuring a good union. Puerperal cases where there is a rise of temperature should always be given a dose of streptococcus vaccine, and where the discharge indicates the presence of colon bacilli by a foul odor, colon bacillus vaccine should also be given. In this way dangerous puerperal infections will nearly always be avoided.

These vaccines can be used to good advantage in so many infectious ailments that it is impossible to even give a casual review of them here. They are being successfully used in acne, furunculosis, boils, gonorrheal infections, gonorrheal rheumatism, cystitis, pyelonephritis, mixed infections in tuberculosis and many other troubles.

In conclusion, it should be remembered that these vaccines are nontoxic and harmless when used with ordinary precautions. They should not be used as last resort remedies after everything else has failed, but should be used early in the course of an infection, to get the best results.

419 St. Aubin ave.

Be sure to avoid prescribing oleo-resin of male fern in connection with castor oil or any other oil. The poisonous filicic acid is dissolved from the male fern by the oil and its absorption rendered easy.

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Eighty Cases of Typhoid Fever.

By C. S. Webb, Ph.B., M.D.,
Bowling Green, Va.

No attempt will be made in this paper to discuss the etiology or the prevention of typhoid fever, except to remark that in my section of the State the disease is far less prevalent than formerly. There are fewer cases and fewer deaths. The eighty cases referred to in the title of this paper embrace all that have been treated by me for the past fourteen years, and of that number there were only two deaths, or two and a half per cent. I saw, perhaps, during that time about one-fourth as many in consultation, but as I was not primarily responsible for them I cannot, of course, give their history. The two cases that ended fatally were both old men. One died two weeks after the fever left him, from inanition. His digestive organs had been in bad shape for several years before, and during his sickness it seemed impossible for him to digest and assimilate anything, although he had good nursing and the most carefully selected articles of nutrition. The other case (also an old man) died in the same way about the close of the third week. Since the day when Loomis closed his lectures on typhoid fever with those earnest words, which were stamped on the memory of his class, I have never seen anything better to be kept constantly in the mind of the practitioner. Here they are:

"Keep down the temperature, keep up the nutrition, watch the convalescence."

That is the whole thing in a nut-shell. For, if the temperature is high and is allowed to remain high, general systemic failure is sure to be the result. If, on the other hand, the temperature is kept at not exceeding 102 degrees, and if a liberal supply of food is furnished and appropriated, the balance is maintained and the system is kept in good shape to fight the toxemia. I try to impress this on my patients and illustrate to them with an ordinary lamp. If the wick is turned low and as much oil as is burned out is put in each day, there will be no danger of the light going out.

But how to keep down the temperature? I do not propose to discuss the many plans which have been before the profession, but I am confining myself to a statement of what I have done in the cases cited. I usually give cinchonidine sulphate. There are hundreds of people who cannot take quinine in large or long-continued doses because of its effects on the nervous system, but can take the other for weeks without any unpleasant effects.

My plan is to give four grains every four hours (in pill or capsule) and to continue this until about the close of the third week. This for two reasons: It is a good tonic to the system, and it is a good and safe antipyretic. As long as the temperature remains at or below 102 degrees nothing else is done for the fever. But if the temperature goes up to 103 degrees or higher, then what is to be done? In this case I give a tablet which contains 2 4-5 grains acetanilide, 2-5 grain of caffeine and 4-5 grain of sodium bicarb. This rarely fails to reduce the temperature and is not to be repeated until necessary. In some cases, but not many, this produces too free diaphoresis. If so, it may be prevented next time by adding to the dose about 1-200 grain of atropine, or even less. But what of its effects on the heart? So small a dose of acetanilide is not likely to have any ill effects on the heart power, but if that is to be feared, give 1-30 grain of strychnine sulphate (or nitrate) at the same time.

So much for keeping down the temperature. It must be kept within safe limits (not above 102 degrees), but it must be done in such a way as *not to weaken the systemic power*. I know there are other means of reducing temperature, but let us take a case where they do not not weaken the systemic vigor of the patient in the same ratio. In my opinion the cold water bath is one of them. I sometimes use tepid sponging, but nothing beyond.

Now as to nutrition. The diet is, of course, liquid and prepared and administered on the principles of common sense. The patient should have enough, not too much, at suitable intervals, and must have some liberty of taste and fancy. I never compel a patient to take any article of food against which he especially rebels, but humor his whims a little and substitute something just as good (as the druggists sometimes say). Moreover, I must be careful to notice whether any certain article of food is agreeing with the patient's digestive apparatus. For example, I have a case now, while I am writing this, who has been taking milk freely and has en-

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joyed it. But a few days ago this patient had a profuse diarrhea, which I found upon examination of the stools to be caused by the milk. So instead of giving something to check the diarrhea I simply stopped the milk and the diarrhea stopped itself.

Thus far I have talked of the temperature and nutrition. The next most important thing is *sleep*. The patient must *sleep* or the nervous system will collapse and the heart will fail. Keep out the company, cast out everything which might have a tendency to annoy or worry the patient. Keep everything about him cheerful. If the case is long continued turn the bed around and let him look at some other part of the room. We must use our arts to break up the monotony, the body racking and soul harrowing, the dull and listless daily grind of the slow-moving wheel. If these measures fail and the patient is restless and nervous, there is nothing better than opium. One grain for an adult, to be repeated in four hours if needed. Occasionally we find a case that is not benefited by opium, but rather excited. These cases are rare, but the next best thing is sodium bromide, thirty grains or more. If the pulse is strong enough, a little chloral hydrate may be added, but the patient *must sleep*. In this way delirium is forestalled and the whole system is refreshed.

I had a case once who was wild with delirium when I reached him about sunrise, and it took me from that time until 4 P. M. to get him to sleep. He slept soundly until 12 o'clock next day, twenty hours, then awoke with his brain clear and went on to recovery without further incident. I am persuaded that many cases of typhoid die from want of prompt attention to this phase of the subject.

Hemorrhage is a complication always to be looked out for and always to be dreaded. I have never seen a case of death from hemorrhage—nor of death in any case who had hemorrhage—except one which I saw in consultation. That was the case of a young lady who was dying when the physician in chief and myself (both called at the same time) reached her bedside. The loss of blood had been so great that she never rallied. My plan is to leave with the nurse two or three dozen tablets of opium, grain ⅛; camphor, grain ¼; acetate lead, grain ¼, with instructions to begin on the first appearance of hemorrhage and give one every fifteen minutes until eight (or twelve) have been taken, and then one (or two) every hour for several days, or a week. I prefer to keep the bowels locked for at least a week, then open with an enema. If the first hemorrhage has been profuse, or if there has been a repetition, I give also ten drops of adrenalin chloride every three hours.

I have never had in my practice a case of perforation, but I am always afraid of it, especially after hemorrhage. That is the main reason for locking the bowels with opium and stopping all peristalsis.

The best of all intestinal antiseptics is turpentine. When the tongue is brown and dry, from five to ten drops of spirits turpentine three times a day on sugar or in capsule or mixed up with mucilage of acacia and flavored, will work a wonderful change in a few days. If the patient cannot take turpentine without vesical irritation, as sometimes happens, I give salol, 5 grains three times a day, or 2½ grains every four hours. But nothing equals the turpentine, which may be given for a week or two, if there is no contraindication.

Convalescence. We must "watch the convalescence." The duration of the fever is usually about twenty-one days, when it gradually comes down to normal after swinging like a slow-moving pendulum for a few days about the 100 degree mark, leaving the patient hungry and begging for food. My plan is to insist that the patient must not get up too soon and that no solid food shall be taken *for ten days after the fever has been normal for at least twenty-four hours*, and provided there is *no fever during that time*. We must look out for relapses. I have seen them sometimes without being able to trace them to any special cause. In three of my cases the relapse lasted two weeks. In one or two others only about five days. Sometimes the relapse comes from getting up too soon, sometimes from error in diet, sometimes, as I have said, from no traceable cause. You know the various theories on this point.

I have given only a condensed sketch of my plan of treatment of the eighty cases referred to, with two deaths. Of course, there are hundreds of little details which claim the attention of the practitioner, and these must be worked out by blending the principles of medical science and the principles of common sense.

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Diagnosis of Chronic Appendicitis.

By Dr. Samuel Floersheim,
New York.

When a patient comes to you suffering from dyspepsia, a much abused and obnoxious term, rule out all other causes for the gastric disturbances before you proceed to examine the stomach as the seat of the cause.

In a surprising number of cases you will find that chronic appendicitis and other affections of the intestines play a very prominent part in the production of gastric symptoms.

The subjective symptoms may simulate closely those of spasm of the pylorus, neuralgia of the stomach, subacute or chronic gastritis, gall stone or nephritic colic, inflammation of the gall bladder, gastric or duodenal ulcer, a pancreatitis, while in rarer instances, intercostal neuralgia and beginning pleurisy on the right side were diagnosed.

In one case a diagnosis of a prolapsed small right kidney was made because the attending physician observed a round mass in the right iliac region and he was unable to palpate the kidney of that side, which, in that particular case, was situated abnormally high and well under the liver.

The diagnosis of chronic appendicitis must not be made upon the symptoms, as these embrace a wide field and are exceedingly misleading. The symptoms may be referred to the stomach, leading one to suspect some form of gastric disease, to the liver, kidney, chest, ovaries and other organs simulating diseases of those organs.

The diagnosis of chronic appendicitis is made from the history of a previous attack of acute appendicitis in a great many cases. In a number of patients this history is lacking, the patient complaining from the beginning of the illness of irregular, intermittent and dull pains in the right iliac region. Vomiting may not be as prominent a symptom as nausea. Other disturbances of digestion, i. e., anorexia, fullness in the epigastrium, constipation or intermittent diarrhea, eructation of gas from the stomach, headaches and general malaise are present. Most often the patients complain chiefly of a peculiar feeling in the right iliac region which they cannot exactly describe as pain, or intestinal disturbance. A few cases have come under my observation for the relief of gas in the bowels.

The patients are usually well nourished, the feces showing no evidence of any illness. The right rectus muscle may or may not be somewhat tense during the quiescent state, but during an exacerbation of an attack, the muscle usually becomes more or less spasmodic.

In this subject I have nearly always been able to palpate the chronically inflamed appendix and demonstrate its position.

Elevation of temperature and increased rapidity of the pulse are not very frequent except in those cases complicated by beginning peritonitis, a tendency to abscess formation, long standing intestinal putrefaction or diseases of other organs. The blood, in chronic atrophic appendicitis, often does not throw any additional light to help in the diagnosis; while in the other forms, especially the slow suppurating and abscess appendicitis, much can be gained from the examination of the blood.

The examination of the feces, macroscopically or microscopically, would not aid in the diagnosis except where the lumen of the appendix is patent in the suppuratve form, when the pus may be observed in the stools. Many forms of bacteria are found in the stool, but thus far none has been described as being the cause of appendicitis.

Bimanual examination (recto-abdominal or vaginal-abdominal) at times aids materially in the diagnosis of obscure cases. Where the inflamed appendix points downward and inward toward the pelvis, much can often be gained by this examination. Where the appendix lies behind the cecum and points upward and outward, it may not be possible to gain anything from bimanual examination.

Of very great help in the diagnosis of disease of any organ is the method known as the ruling-out diagnosis. This method should be especially employed in diseases of the digestive tract, because of the preponderance of diseases which have accompanying symptoms of gastro-intestinal disturbances.

We must differentiate chronic appendicitis from neuralgia of the skin covering from the right iliac region, myalgia of the abdominal muscles, rheumatism and enteritis of the ileum, inflammations of the cecum, ascending colon, cancer of the cecum, psoas abscess of the right side, aneurism of the right common iliac artery, internal hemorrhoids, beginning inguinal hernia, direct or indirect hernia on the right side, pyelitis

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of the right kidney, abscess of the right kidney, kidney stones, gall stones, inflammations of the urinary and gall bladder, small prolapsed kidney, impacted feces in the cecum and lower ileum, beginning typhoid fever with a history of a previous attack of acute appendicitis; in women, ovaritis, salpingitis and abscess burrowing from chronic suppuration of the uterine adnexa, including purulent salpingitis.

Interested readers are referred to modern works of medicine for the different points in diagnosis of the various diseases above mentioned, as the discussion of them would make this paper too lengthy. It is of great importance to know the diagnostic points in the differentiation of the different diseases that have been above cited to be able to make a diagnosis of chronic appendicitis.

Tubercular Pericarditis.

To The Medical Council:

On November 20 I was called to see a young man who, the mother said, had "caught a cold," and was coughing.

Family history: Grandmother living, with chronic tuberculosis; mother, living, has an old healed tuberculosis of left hip; father, dead (accident); sister and three brothers, living, health fair.

Patient, age 18, small in stature, always pale, anaemic. I found him propped up in a chair (he had pain when lying down); cough dry and "brassy"; precordial pain. Inspection showed the apex beat in the normal position. Palpation detected "to and fro" rub. Auscultation from base of heart and over the whole heart revealed sharp "to and fro" rub. The case was diagnosed as "dry pericarditis." Temp., 102; pulse, 112.

I sent the patient to St. Anthony Hospital for observation and treatment. Used salicylates and aspirin, ice bags, etc., temperature still being 102 in A. M., and 105 2-5 P. M., in November 30—highest.

Gradually the "dry rub" disappeared and the dullness of heart area extended downward, from the second and third ribs down to the fifth rib, right of sternum to sixth inter space 2 inches outside of left nipple line, forming cone with a wide base downward.

Having read "Leube," who makes the differential point between enlarged heart and pericarditis with effusion this—"Dullness extends beyond apex beat," I decided that there was an effusion. The patient now had to be propped up in bed all the time, and had a dry, brassy cough, with dyspnea.

December 11th, after having for days outlined the heart area, I took a needle, 3 inches long, a little larger than a hypodermic needle, and inserted it through the chest wall at the sixth inter-space, 2 inches to the left of the nipple line, and let flow out 50 cc. of bloody serum.

It had a specific gravity of 1028, and contained serum albumen, red blood cells, leucocytes and bacteria.

I know the needle was in the pericardial sac, because it would move with each heart beat. The pulse, before the operation, was 120, and after the operation was only 128. Local anesthesia was used on the chest. Soon after the operation he felt better.

He now began to improve daily, and on December 25th he returned home. January 5th the temperature was normal and the pulse now 96. He is gaining in weight daily.

The little oddity of this is the location of making the puncture (most authors favor the fifth interspace left of the sternum, but move carefully here).

I hope to hear reports of a few other of such cases.

Emil Lofgren, M.D.

Rockford, Ill.

EXTERNAL UTERINE PALPATION.

A Neglected Physical Sign—Useful to Diagnose the Onset of Labor.

By Cyrus Hamlin, B.S., M.D.,
Brooklyn, N. Y.

It is often difficult, without vaginal examination, to ascertain clinically as to whether labor has actually commenced or not. This is especially true in the primipara and the neurotic, before the onset of the classical symptoms, viz.: chill, irritability of the bladder and rectum, excessive vaginal secretion, etc. The most important symptoms are the pains, but pain alone, unfortunately, is a misleading subjective symptom, not only in labor, but in other conditions, as all experienced clinicians know. The personal equation enters into it so largely. Many patients, more often primiparæ, who have not as yet experienced the throes of child-birth,

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seem frequently to anticipate the event. The physician having calculated the date, and probably the engaged nurse or a relative also gone over the matter, all tend to impress the time of the prospective confinement on her already over-wrought imaginative mind. As the gestation period draws to a close, should the patient suffer from abdominal distress, due to intestinal indigestion, colic or flatulency or other cause, the doctor is sent for in post-haste, as she may think she is in labor, and even if she is not, she ought to be, as the date set down is near at hand. In this class of cases and those where labor has actually set in, the writer does not make any vaginal examination until after he has employed external uterine palpation in the manner described below.

Frequently, no examination is necessary during parturition. The practice of the modern times is to make as few as possible, as much manipulation invites sepsis. In order to prognosticate the advent of labor and its probable duration, the text-books on obstetrics give full account of the subjective symptoms, but when the subject of pain is taken up we are advised to note the character, strength, frequency and duration of the same.

It seems to the writer that the practical point has been totally missed. How are we to note the pains? No one ever saw one. In talking with the visiting obstetrician to one of the large hospitals, where the writer served his apprenticeship, he had never heard of external uterine palpation being used in the manner and for the purpose that is here given. Well-threshed-out practical points are as necessary to the success of the *real practicing physician* as to the ultra scientific theories and the prolonged laboratory examination. For this reason, and this only, this paper has been written.

The author when called to a confinement case where the patient thinks she is having pains and is in labor, and history elicited creates doubts as to whether she is soon to be delivered or that she is certainly not far advanced, places the palmar surface of one hand over the body of the uterus and a watch is held in the other. The duration of the uterine contractions is *noted to the second,* and the strength of the same by the degree of firmness. A comparison is made with the statement of the patient as to when pains commenced and ceased, and if they have not lasted longer than thirty seconds, substantiated by her statement, the case is left, and if I have a trustworthy nurse I teach her this simple procedure, with the instructions to call me when the pains have lengthened from one to two minutes and occur every twenty minutes to one-half hour.

If the amount of suffering is all out of proportion to the findings as determined by palpation and there is a big discrepancy in the patient's statements as regards the length of pains, as compared to the physical signs, she is put down as neurotic and a dose of morphia, or of chloral per rectum, is given and she is enjoined to go to bed and sleep.

The writer firmly believes that if this class of cases are handled in this manner, in many cases the use of the instruments later will be averted, and much wear and tear saved all around. If neurasthenia and hysteria can interfere with the function of almost any organ or viscus, it is reasonable to assume that the uterus can be under the tyranny of the nervous system, particularly just before or during labor, as the patient's mind has been concentrated for several months on the reproductive system.

In another class of cases we find just the opposite condition—a stable nervous system, and ample pelvic room, scarcely any pain is complained of, but external uterine palpation will detect good firm contractions of long duration. It is needless to state that such a patient should not be left.

The advantages of external uterine palpation might be summed up as follows:

1. An aid to the diagnosis of the onset of labor.
2. It lessens the number of vaginal examinations necessary.
3. It helps to determine the nervous element in the neurotics.
4. It is a time saver.
5. It enables the nurse to know when to send for the attendant.

It seems almost needless to state that this physical sign is not applicable where there is mechanical obstruction, grave fetal dystocia or in the latter stages of labor.

Another practical point that is not usually taught or mentioned in the text-books, and that is, to take your patient's temperature at the first call, or as near the commencement of labor as possible. By so doing, you will be put on your guard if there is any intercurrent trouble, and you will be saved from worry later on, knowing that there is no septic condition complicating.

102 Hancock street.

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The Forceps in Obstetrics.

To The Medical Council:

In this article I will endeavor to warn the younger members of the profession, those who are just beginning its practice, about the too frequent and too promiscuous use of the forceps in obstetrics.

The student is told in the lecture room when and how to use the forceps, but seldom is he told when *not* to use them, use the forcepts if delivery can be accomand the statement may well be made, never plished in any other manner.

It is not my purpose to enter upon a lengthy discussion of the use of the obstetric forceps, nor to recount the conditions wherein they may be used with benefit to either mother or child, or to both.

It may be stated, as a broad principle, that the physician should never leave his patient after the dilatation of the *os uteri* has begun.

A physician stated, some time since, that he uses the forceps upon all occasions where labor is tedious, even if there would be a successful termination without their use.

This is wrong, both in theory and practice. When nature is performing her work satisfactorily, even though she be a little slow, let her alone.

Many physicians in their haste or, probably, from the multitude of their professional engagements, use them with less reference to a termination of the woman's sufferings or the actual need for them than to a desire to end a disagreeable job, and also to get away from unpleasant surroundings.

For in some cases of this nature the environments are not of the most pleasant or refined character.

I could give the exact data by referring to the record, but I can almost positively say that a dozen times will mark the limit of their use in my experience.

I recall a case where their use would have resulted disastrously. Some years ago I was called to attend Mrs. M., in her second confinement. Arriving at about 4 A. M., I found that labor had hardly begun, but the woman was comfortable and hopeful. About noon uterine contractions set in sharp and frequent and continued so until labor was successfully concluded, between 4 and 5 P. M. In the meantime the woman, being somewhat impatient, begged me to administer chloroform and end her troubles with the forceps. Seeing no necessity for this course of action I refused, and subsequent events proved that I was right. When the head came, instead of the usual relaxation, the woman gave a cry of agony and begged for relief. She assumed a position of complete opisthotonos.

I made slight traction on the head which caused her to cry out in pain. Upon examination I found the neck of the child so twisted that the face was looking at the back and the shoulders had descended squarely across the outlet, and each contraction, which still continued, caused her to cry out in her agony.

I had no time to administer remedies, but, grasping the head, I forced the body up and, pressure being relieved, rapid rotation of both body and head ensued. The child was born alive and, giving it to the nurse, I gave my attention to the mother, who was bathed in a clammy sweat and so prostrated that she could not raise either her head or arm from the bed. Both made a good recovery.

Had I used the forceps death would have resulted certainly to the child and serious injury, if not death, to the mother.

Though quite a few years have elapsed since that experience, I still shudder when I recall it, and speculate what would have happened had I yielded to the impulse and the woman's wish to speedily terminate labor.

It is undoubtedly true that the lives of both mother and child have been saved by a timely use of the forceps.

I do not condemn their use when occasion requires, but give as my rule to abstain from using them *save when labor cannot possibly be accomplished in any other manner.*

My word should have some weight, inasmuch as I have but recently celebrated the sixtieth anniversary of my birth, and, in a few months, of thirty years' practice, and will shortly quit the stage of professional activities.

But what is worthy of more consideration than age or length of practice is the fact that I have to my credit 100 per cent. of success in all of my obstetric cases.

J. Horton Kelley, M.D.
Still Pond, Md.

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Difficult Obstetrical Cases in Country Practice.

To The Editor:

Your valued paper finds its way into thousands of offices of the brethren who practice in the city, with hospitals and trained nurses near at hand. We who work in the country districts do not have those conveniences always. The following are the histories of the last nine obstetrical cases I attended:

9/17/1910. Mrs. W. Multipara. Breech presentation. Child dead before my arrival.

9/20. Mrs. B. Multipara. Breech presentation. Child dead before my arrival.

10/19. Mrs. R. B. Multipara. Breech presentation. Child dead before my arrival.

10/20. Mrs. E. B. Normal labor. Child living.

11/5. Mrs. M. Twins, both breech presentations. Both children living.

1/16. Mrs. I. Primipara. Anancephalus.

11/11. Mrs. O. Primipara. Large, apparently healthy, child. Lived 3 hours.

11/30. Mrs. P. Normal case. Child living.

12/16. Mrs. L. Primipara. Spina bifida and hydrocephalus. Breech presentation.

From these histories you will see that, of ten children, there were six breech presentations and only four children survived, to say nothing of the presence of twins and monstrosities.

H. A. Pawling, M.D.

Lowville, N. Y.

Venereal Prophylaxis and Race Improvement.

By Dr. Joseph Lebenstein,
New York City,
Clinical Assistant in Genito-Urinary Department of the Post-Graduate Hospital Medical School.

The rather profuse discussions which much of our medical literature lately contains relative to the important bearing which sexual disabilities and diseases have upon the improvement of the human race, have led me to voice a few sentiments which are based upon observations both in private and institutional practice. By these we may see that the contentions of many fellow practitioners, who have fought for venereal prophylaxis, segregation of the social evil and regulation of our marriage laws, are self-evident, and give absolutely the only means by which we can ever hope to control the dissemination of diseases of sexual origin.

Pathologic and bacteriologic investigations, and the serum therapy which have been their outcome, have given to the world remedial agents which have markedly reduced the mortality of acute diseases, the virulency and prevalence of which had for ages been a menace to the human race, and likewise have we been successful in obtaining serums and chemical combinations which, before another decade is past, promise to do much toward controlling malignant disease.

All this we know, all this we follow with great eagerness and admiration for those of our profession who are devoting their lives to this field of investigation, and who are the first to give to the world a new method of relieving morbid conditions which before had been impossible to control. But have any of my readers given sufficient attention to the causes which are daily mowing down thousands upon thousands of souls, simply because they lack proper knowledge of prophylaxis, and are contaminated when they attempt to gratify their sexual propensities?

If, on the other hand, they have been fortunate enough to obtain some slight knowledge as to the dangers of promiscuous sexual intercourse, they perhaps (and I have seen many such cases) gratify themselves by prolonged self-abuse, impairing their nervous structure, and often entering upon the marriage state unfit, physically and mentally, and bringing into the world children whose health can only be a menace to the whole community, and who are forced to innocently suffer the hereditary stigma.

Is it not our duty to encourage prophylaxis of disease by regulating marriage laws and by other measures, as much as to attempt to stamp out disease which already exists, with a view of improving the human race by helping to rear fewer but better children?

To many of my fellow practitioners this question of prevention, as the first step toward race improvement, may seem so self-evident that comment is unnecessary; yet it is but recently that a very few doctors have taken the liberty to suggest that the time has come when we must shake off this cloak of prudery and discuss freely

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with the laity these questions of sexual diseases and their bearing upon the future of the human race.

What, therefore, have we before us as our new task? First, to begin at an early age and teach a boy the detriment of self-abuse, and to enlighten him as to what sex actually means. Second, to make clear to a girl, at perhaps the time when her menstrual flow begins, its meaning, and to also instruct her as to the difference between the sexes, and to teach her how to care for herself.

Third, to teach the males, at an early age, the dangers of infection as a result of promiscuous intercourse, and its affect upon later life.

Next, and perhaps most important, to not unnecessarily worry either boy or girl with certain sexual functions which are physiological.

We next must deal with those who have led the libertine life, and have fallen prey to venereal diseases, and make every effort to segregate them, so as to have them under our constant observation while administering the necessary treatment and prevent them from having intercourse.

I favor even further attempts in this direction. Innumerable times during the past few months patients have presented themselves for treatment who occupy positions as cooks, bakers, waiters, and who, therefore, in one way or another, prepare and serve our food while they are suffering with the most virulent venereal sores, not to speak of many more who have acute gonorrhea, and whose knowledge of the dangers of transmission of these diseases, in most cases, is absolutely nil. Even when they are aware, in a very small percentage of cases, that they are subjecting their fellow men to the dangers of infection, they indifferently disregard all consideration and continue their work. Laws should be enacted to compel such persons to undergo careful physical examination, and to prevent them from entering upon such duties until they have received a clean bill of health, and hotel proprietors and others should be compelled to show such certificate for each one in their employ.

These efforts should not be limited to those who, in one way or another, prepare and handle our foods, but made a law without limit wherever many persons are employed who use the same toilets, toilet articles, and wherever such persons come in close contact.

These are, then, the extremes, if you wish, to which we are compelled, if our efforts in the direction of sexual prophylaxis and race improvement are ever to be of real benefit to humanity. To sum up, it is our duty to enlighten the laity as to the real problems they are called upon to contend with, and until we have the co-operation of the masses and our lawmakers for the control of the dissemination of venereal diseases, the ravages of these diseases and their outcome, *malignant disease*, will continue to be beyond conception.

224 East Fiftieth street.

Sexual Science for Children and Adolescents.

By R. W. Shufeldt, M.D.,
Major, Medical Corps, U. S. A., Washington, D. C.

During the last fifteen or twenty years I have published quite a number of papers on matters pertaining more or less to the science of sex. Some of these have been in the form of extensive reviews of books on the subject; some along forensic or medico-legal lines; while others have been upon various topics in psychopathia sexualis. In the list of the title of these contributions I find no paper devoted strictly to the teaching of the essentials of sexual science to children and adolescents. A number of years ago, after going over the American literature upon this last-named department of the science, it occurred to me how very unsatisfactory the various treatises were that had been published. In fact, I was gradually bringing myself to the point of preparing the material for a small handbook on the subject for parents, for instructors in schools of every grade, and for others. I remember very well when in conversation with Prof. C. H. Smith, of Yale University, I unfolded to him my plan of teaching the anatomy and physiology of the sexual system in our own species by first beginning with young children and explaining to them, in terms they could comprehend, the matter of reproduction in plants, and from such instruction lead them up gradually to human reproduction through properly selected examples among the lowest forms of life, to include thereafter types among the invertebrata and vertebrata, grading the information imparted to the age and capacity of the inquirer or student.

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Professor Smith appeared to be delighted with this method, which had never occurred to him, and pressed me very hard to elaborate it for a publisher. At that time, however, I was engaged upon three extensive volumes, all of which have since appeared, and the matter lay fallow for some time, until only very recently, when along comes from my friend, the author, Dr. B. S. Talmey, of New York City, a little volume of some two hundred pages and over sixty illustrations on this very topic.

"Genesis," which is the title of this book, and has already received a brief notice in this journal, is, as its author states, a Manual for the Instruction of Children in Matters Sexual, being "for the use of Parents, Teachers, Physicians, and Ministers." Why the last named it is difficult to see, unless it be for the fact that the priesthood, as a whole, have been responsible from the earliest times, more than any other cult, for the untold and incalculable harm it has done the human race at every stage of its evolution through the discouragement and suppression of all knowledge on this subject by every means in its power. I think the less ministers have to do with sexual instruction the better it will be for the children.

"Genesis" has been read by me from cover to cover with great care, and I am of the opinion that for the particular purpose for which it was published it is, by all odds, the most scientific, practical, and helpful volume of the kind that has appeared up to the present time. It fulfills the ends of *truth*, and meets the requirements of scientific and modern pedagogy. It might be contended that it is too scientific, but no such contention can be sustained for a moment. Any intelligent parent or teacher can comprehend and duly impart what it essays to teach. The greater the amount of intelligence, knowledge of juvenile psychology, and familiarity with some kindred works on the subject, the more efficient will be the teaching and the more certain the results in society at large. The book will *not* be read by the dullard or the mothers among the great mass of unwashed aliens in our slums. In both theory and principle the methods adopted for the presentation of its subject-matter are absolutely correct. In imparting sex knowledge to children of any age and to adolescents we must, of course, grade it according to their mental capabilities to comprehend it. Their minds at all ages must, through the proper training and example, be completely robbed of the infamous notion, fatal to all juvenile modesty and morals, that there is one single bit of wickedness, "nastiness," or an undesirable taint of any kind, in the study and comprehension of *normal* reproduction in all nature. We must be at complete liberty to use any language at our command, so long as it is chaste and elucidative, to explain to the youthful mind, as it develops, the nature, the growth, and *the fate* of the *cell* in all forms of life in this world, and naturally it is best to begin with the plant forms, and these to be followed by the lower organisms through various typical representatives in the series to include man. Essentially this is what Dr. Talmey has attempted and has accomplished with such signal success. Fortunately, the intelligent classes in the civilized world are now, at last, beginning to appreciate the criminality attaching to those who have charge of the rearing and teaching of children and adolescents who do not possess at least the elements of a sound knowledge in sexual matters, and in the proper way, and at the proper times, impart that knowledge. This is a long step in advance, consequently the world is ready for such works as "Genesis," and their circulation cannot be too extensive. It is a safe guide-book on the subject, and that is what is needed to second the efforts of the teachers. Education,—constant, thorough, and universal,—taken in connection with the complete removal of all secrecy and false representations in sex matters, is, in reality, what constitutes the real solution of this problem.

The first nine chapters of "Genesis"—each brief and to the point—are simply classics on the subjects of which they treat, and it is truly remarkable that their author, in such limited space, could say so much and say it so well.

It would seem to entirely omit, in a work of this kind, between fifteen and twenty years of age, "a scientific discussion of the anatomy and physiology of the external sex organs of the human body and of copulation" is certainly a great mistake.

The question of copulation, for instance, and its proper consideration, is one of the highest importance. A lack of knowledge on this point has caused untold thousands of divorces, millions of unhappy marriages, and, finally, an endless number of female invalids in the world since the world began. It would seem that this is the very kind of information that "the most scrupulous par-

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ents" would demand, even were it to require another volume to furnish it.

In Chapter XII, being for children from seven to ten years of age, we have a very beautiful lesson on the reproduction of certain plants, with appropriate illustrations. Though a little too scientific, it is, nevertheless, excellent, and a skilful teacher cannot only use it to advantage but interestingly enlarge upon it, and perhaps simplify some of the terms, at the same time using a blackboard and chalk, producing enlarged figures. From ten to thirteen (Chapter XIII) we enter upon the sex phenomena in the animal kingdom, and it is made very clear to the young student, leading him to the initial information on the subject for the human species, which he or she will acquire without shock of any kind and in a most natural manner. Chapters XIV and XV are devoted to matters relating to psychopathia sexualis, and pathology, sexual diseases, etc. Menstruation and pollution are likewise dwelt upon, and the whole is admirably presented and easily comprehended.

The constant and terrific ravages among our people—men, women, and children—due to the venereal diseases is pointed out with most telling effect and in the most instructive manner by Dr. Talmey, and his warning in this matter is of priceless value.

We find our author to be a stout advocate of complete continence among unmarried men with respect to sexual satisfaction, and this for hygienic reasons. To the present reviewer this appears to be a matter of purely a personal equation, and to the frigid types among men it is no virtue to be virtuous. I have met no end of men in my life in whom the sexual impulse was so strong that continence in them would have proven a positive injury. Women so constituted that the impulse in them becomes imperative as to gratification have no trouble in finding mates in legal marriage, though some wise men are chary of them, as, later on, they may become unfaithful to the husband.

Talmey, in quoting his authorities, over a dozen of them, to support his views in reference to complete continence in unmarried men, fails to use any quotation marks, and thus introduces doubt as to what his quoted authority has actually said. He brings forward Forel first, but what he quotes from his "Sexual Question" is garbled, and this may be the case with respect to other citations. Forel distinctly points out that "this state cannot be considered as normal, especially when there is no hope of its coming to an end in a reasonable time" (p. 81). He also states that "continence may also be a cause of impotence" (p. 220) as well as "end in insanity" (p. 422). So, I do not think that Dr. Talmey has a supporter in Forel in this matter, and I doubt any one else who is familiar with the psychology of men. Talmey is a believer in the coeducation of the sexes in the schools and other institutions of learning. In this matter I entirely disagree with him, and I have had ample opportunity to study the conditions personally. So important, however, is this question that it will be impossible to touch upon it at all here, the limitations of space being prohibitive. Our author appears to be a strong religionist, and it seems to be difficult for him to keep religion apart from his otherwise most excellent treatises on sex, art, woman, and social science. Practical sexual science has nothing whatever to do with religion or any other superstition. Indeed, the advance of the former has always been powerfully opposed to the latter.

Foot Powders.

The powders may be divided into three groups:

1. Those which are soluble in water, and therefore equally soluble in the sweat of the feet. Boric acid is soluble in water and sweat, and is useful in cases in which there is excessive sweating, with or without a bad odor.

2. Powders which are insoluble in fluid or in sweat, of which starch powder or oxide of zinc is a type.

3. Mixed powders—partly soluble and partly insoluble. For men who have much walking to do the mixed powder is the best:

Salycilic acid (very finely powdered)	1 dr.
Boracic acid (finely powdered)	1 oz.
French chalk (carefully prepared) to	4 ozs.

This is used in European armies for the prevention of tender, sore feet.

Another worth noting is:

Salicylic acid	1 dr.
Oleate of zinc (powdered)	1 oz.
Talc or French chalk to	4 ozs.

This makes a soapy-like powder exceedingly pleasant to the skin. Part of the boracic acid in the first prescription would be soluble in sweat. The chalk and oleate of zinc are not soluble, and would render the skin soft and comfortable, and remove the heat and redness.—*The Hospital.*

Powdered resorcin applied pure to venereal warts is excellent. Dries them up more quickly than any other application.

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The Medical Profession Must Change Its Tactics.

By Wm. J. Robinson, M.D., New York,
President of the American Society of Medical Sociology.

He who is not a frequent visitor to radical clubs, does not come in contact with newspaper men, with New Thoughters, and does not read regularly the numerous naturopathic, health culture and physical culture journals, and other alleged advanced publications, can have no idea how the medical profession is ridiculed, how it is maligned, how it is lied about, how it is misrepresented, how it is "knocked" on every possible occasion.

We are pictured as ignoramuses, grafters, butchers, anxious to operate whether there is a necessity or not, drug dopers, etc., etc. We are denounced as a trust, monopoly, and any attempt of ours to organize, to pass laws protecting the public health, is characterized as an attempt at class legislation, a desire for special privileges, inspired by our fear of the competition, by our fear of the superior skill of our irregular rivals.

And the average physician who has not given the matter any thought has no idea what effect these unceasing slanders and persistent lies have on the public mind, how suspiciously a large part of the public is beginning to look at the medical profession, how we are losing the confidence of the people, how the ground is slipping from under our feet.

As an illustration we need only mention the reception that has been accorded to the suggestion of a Federal Department of Health. The motives that actuate us and the objects of such a department were at once misrepresented, the people were made to believe that their freedom to choose a medical adviser was threatened, the forces of reaction and obscurantism, masquerading in some instances under the guise of liberalism, were quickedly marshaled and in a short time a society was organized, which now claims a membership of one hundred and fifty thousand.

We physicians are ourselves to blame. When the irregular, fantastic and pernicious cults began to make their appearance we paid no attention to them. We thought they amounted to nothing, and would soon dry up and shrivel away of themselves. When the malicious attacks began to appear in the various quack publications we remained silent. We considered it *infra dignitatem* to pay any attention to them, and we thought that the public would have no difficulty in seeing through their falsity and meretriciousness.

Our long and patient inactivity has been due to the false idea that truth will always triumph and error is bound to die. Yes, eventually. But if error is allowed to grow and spread unhampered, while those who see the truth will not take the trouble to proclaim it and expose the error, then it can take centuries before the correctness of the truth and the falsity of the error will be perceived.

In this, as in every other line of human activity, prevention is immeasurably superior to cure, and the right way to fight error is not to permit it to get a firm foothold. Error and superstition are hard things to uproot after they have attained the dignity of a universal belief.

It is time that the medical profession change its tactics and assume a wide awake militant attitude. It is time that we actively attack error wherever it shows its head. By reading papers before lay audiences, by participating in discussions, by writing to the newspapers, by refuting the false arguments of the false prophets wherever they appear, we can do much toward destroying the influence of the quacks and the irregular cults. In short, we must throw off our exclusiveness, we must go out to the public and take it into our confidence.

The truth is with us—that we know; only we must not hide it under a bushel and expect that its light will, without any effort on our part, penetrate into the darkest recesses of ignorance and quackery.

12 Mount Morris Park, West.

Cough.

To The Medical Council:

For cough in the aged, give a good petroleum emulsion, teaspoonful thrice daily and at bedtime; also give oil of sandalwood.

For cough following la grippe, give oil of sandalwood, ten drops thrice daily.

Cannabis indica is one of the best additions to cough mixtures; it quiets the tickling in the throat, does not constipate nor disguise the symptoms.

Strychnine is one of the best remedies in cough from disease of the larynx.

In cough of phthisis, give ten to fifteen drops of tincture of capsicum. Give the

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liquid extract of euphorbia and the comp. tinc. benzoin, in ten-drop doses of each; drop or two of chloroform may be given with the capsicum. Codeine is an efficient remedy.

Solanine has a marked sedative effect on the nerve terminations of the pneumogastric. It is, therefore, of use in all hyperosthenic states, irritative and spasmodic coughs, and those of reflex origin; dose, one-half gr., repeated hourly.

Incessant reflex, convulsive or nervous cough may be speedily reduced by gelsemine in dose 1-250 grain every hour or less. Counterirritants over the vagus in the neck often relieves irritative coughs.

In cough with fetid sputum, give thymol, creosote, eucalyptus, menthol.

In all forms of dry, troublesome coughs the following will produce most excellent results: Paint chest and back with liquor iodi fortis, diluted, if necessary, with equal parts of tinc. iodine.

In coughs orignating from cold, the chloride of ammonia is the remedy, one two-grain tablet every three hours. If any pain in the chest, apply a blister at night and cover blister with a silk handkerchief next morning.

Cough is frequently caused by some irritation of the upper air passages. Treatment must be directed to these conditions, which are due to reflex irritation of the branches of the pneumogastric nerve. Piscidia controls branches of the pneumogastric nerve and is the remedy in these cases.

A child with a mild bronchitis must be watched closely, for the smaller bronchial tubes and lung tissue are apt to become involved and the condition rendered serious.

In purely laryngeal cough, phosphorus has no equal.

In chronic bronchial cough, inveterate and of long standing, piscidia is of great value.

Spasmodic croup is often relieved as by magic by the application of cloth dipped in hot water and wrapped around the throat. It acts much quicker than an emetic, and its employment does not contraindicate the use of other remedies.

The unbounded influence of nux vomica upon the pneumogastric nerve makes it a most reliable remedy in many kinds of cough—night cough and the paroxysmal laryngeal without lung or bronchial symptoms, but characterized by persistent tickling sensation in thre throat. In all these cases one-drop doses of the tincture frequently repeated are much more serviceable than larger doses at longer intervals.

J. H. Miller, M.D.

Littleton, Colo.

Whooping-Cough.

To The Medical Council:

A lady brought her nine-months-old baby to my office, telling me it had suffered with whooping-cough for twenty weeks. She had listened to the voice of the old women who know such a lot of things that aren't true, and had accepted this maxim, that whooping-cough takes "nine weeks to come, nine weeks to go"; and only after two weeks had elapsed besides the eighteen did she conclude to consult a doctor.

Why does it not seem the correct thing to consult a doctor whenever a person is sick?

How many irreparable wrongs have been inflicted on these delicate little organisms by that senseless, stupid, baseless tradition!

Left to itself whooping-cough may endure for weeks, and then trail off into a condition where no man may know where the real malady ends and the habit-cough begins. But why should it be left to itself?

In the old days, when we had none but doubtfully affective remedies, there might have been some excuse for skepticism as to the power of the physician to control this malady; but there is no such excuse now. Indeed, we are perhaps embarrassed by a choice between a number of remedies of unquestionable efficacy.

Quinine was advocated twenty-five years ago. A physician in Turkey reported that he prescribed quinine, in doses of 3 grains every four to eight hours, for his three children. Two of them improved, the force of the attack being quelled as the children came under the influence of quinine. The baby did not improve until the mother acknowledged that out of pity for the little creature she had not given it the bitter doses. When the quinine was administered to it, the baby got well, as the older children had done. I used quinine for years, and found it as effective as our Moslem *confrére* had claimed. I gave the medicine in syrup of yerba santa, which covered the bitterness acceptably, and I believed there was a beneficial local as well as a general effect.

Then came a message from Norway, telling us that whooping-cough could be cured by fumigating bedroom, bedding and clothes

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with sulphur, giving the child an antiseptic bath, and then putting it to sleep in the fumigated bedroom, in a fumigated nightie, in the fumigated bed and bedding, and dressing it completely next day in fumigated clothing.

The author forgot to apply the method to the sick child's throat, but when this omission is rectified the destruction of all outside germs to prevent reinfection is of value, and the method proved successful. I think quinine acts as a germicide on the throat, and I have sprayed the larynx, pharynx, etc., with disinfectants such as europhen in fluid petrolatum, with decided benefit. Sometimes the cure is as instantaneous as the Norwegian introducer claimed.

The most successful treatment I have as yet employed is that introduced by the late Dr. W. L. Coleman, of Texas. This consisted in saturating the patient as rapidly as possible with calcium sulphide; meanwhile keeping him under a slight but perceptible influence of hyoscyamine. Enough of the latter is administered to induce dryness of the mouth, flushing of the face or dilatation of the pupils. Usually the dryness is manifest before any other symptom, and this suffices. To a child two years old and weighing 25 pounds I give 3-250 grain of amorphous hyoscyamine in three ounces of water; dose, a teaspoonful of this solution every half to one hour until the signs of action are evident, then often enough to sustain this effect. This markedly modifies the nervous hyperesthesia, and reduces the cough to what is requisite to bring up the secretions.

Meanwhile, the patient has been taking, from the time of my first visit, a granule of calcium sulphide, gr. 1-6, every half hour or hour, until the skin exhales the odor of the drug, when saturation is established. I have known of thousands of cases of whooping-cough thus treated, and never yet heard of or witnessed any harm resulting from the treatment. Saturation should be maintained for a week, or until the malady has been quelled. Many children exposed to this disease and almost surely infected—for it is the most infectious of all diseases—have been saturated with sulphide during the incubative period, and none of these children has developed the disease then, or when exposed to subsequent epidemics of whooping-cough.

During convalescence, as throughout the attack, the bowels must be kept free and aseptic; for here, as elsewhere, fecal toxemia is a serious complication, inciting to malignancy what would otherwise have been a mild attack. One of the best tonics during convalescence is quinine hydroferrocyanide, of which a child two years old may take 1-6 grain three times a day; or better, gr. 1-67 every half hour or hour. Dissolved in water, sweetened with saccharine, colored with carmine, and flavored with cinnamon, scarcely a child will object to this remedy.

This method has been so satisfactory that I have not felt impelled to make trial of several newer remedies, since the results claimed for them did not equal those I get from the above-described method. Assuredly, with physicians who are familiar with these remedies, there is no question of whooping-cough persisting for eighteen weeks; or the half, quarter or eighth of this period, to say nothing of the peril of subsequent tuberculosis or emphysema, or the shock to the delicate nervous organization of the child.

W. C. Abbott, M.D.

Chicago, Ill.

Some Scientific Theories.

To The Medical Council:

It seems that medical men are at present the greatest offenders in a literary way. Misstatements as to historical facts, garbled quotations, unwarranted deductions, and hasty claims born of faulty premises, are the rule. Either because of ignorance, or a disinclination to criticise a brother physician, no protest is entered. Thus error is sent on its merry round to propagate its kind. The Medical Council for December, 1910, contains an article by B. E. Dawson, that calls out loudly regarding "The Language of Pain." Dr. Dawson will pardon me if I play upon the words of his title and assure him that what I now write is the "language of pain," resulting from his efforts to enlighten the readers of The Medical Council as to certain matters.

He says: "Tyndall wondered why the heartsease did not grow near English villages. Careful study revealed the following facts: First, in English villages dogs run loose; second, where dogs run loose, cats must stay at home; third, where cats stay at home, field mice abound; fourth,

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where field mice abound, bumblebees' nests are destroyed; fifth, where bumblebees' nests are destroyed, there is no fertilization by pollen. Therefore, where dogs run loose, no heartsease grows."

Now, I was not aware that Tyndall was a naturalist, and I had a hazy recollection that Darwin and Huxley had written something in regard to the relation of bumblebees, mice, cats, and the plant heartsease; I failed utterly, however, to recall where the dogs came in. We rarely see dogs chasing cats; it is a sight the small boy delights in, girls scream over, men witness with a chuckle and old maids detest. It takes a stretch of the imagination to picture a village where the dogs busy themselves chasing cats. Both are household pets, and live at amity.

If Dr. Dawson will take the trouble to turn to Darwin's "Origin of Species" he will find what I think is the source of his quotation. Chapter 3 deals with the "Struggle for Existence," and under the subhead, "Complex Relations of All Animals and Plants," I read: "I find from experiments that bumblebees are almost indispensable to the fertilization of the heartsease," . . . "and Colonel Newman says, 'Near villages and small towns I have found the nests of bumblebees more numerous than elsewhere, which I attribute to the number of cats that destroy mice.'" Further, if Dr. Dawson will get Huxley's "Darwinians" (Appleton's publication) and turn to page 445, he will find the following: "It has been noticed that there are a great many more bumblebees' nests in the neighborhood of towns than out in the open country; and the explanation of the matter is this:" Then Huxley states the sequence of relation as mentioned by Darwin. Now, "dog-on-it," I want to know how it came about that Tyndall and the dogs were haled in and made to contradict the observation of Darwin. A nice caper to cut!

In the same number of the COUNCIL we are told, very frankly, of a nice condition of affairs, of a "government mess" by Dr. Rendtorff. He says: "The source of an epidemic is apt to come to light after many futile attempts at discovery." In another place he says: "It is not very long since the possibility of infection from others in apparent health was considered at all, and it may be that the future will demonstrate this to be more common than has been supposed." Now, in his account of the epidemic of typhoid, he tells us that "The offense of this cook was quite accidentally discovered by a boy." Accepting the facts related as "ultimate" so far as our purpose is concerned, we had an "endemic," that is, infectious disease confined to a well defined group. In such case the problem is fairly within the grasp of health authorities.

It is otherwise with epidemics. These are "Phenomena sui generis," as Hueppe has well remarked. Why is this so; why are epidemics practically beyond our control? The answer is evident, and is contained in my second quotation from Dr. Rendtorff, where he mentions persons "in apparent health" conveying infection. That implies a "loss of control," and a scattering or dispersal of sources of infection. "An unweeded garden, gone to seed." To look at a common water supply as the cause is not less foolish than to ascribe hospital gangrene and childbed fever to hospital air. However, it is not my purpose to enlarge upon this phase of the question at present. I wish now, and in this instance, in connection with Rendtorff's article, to point out that the "carrier theory" is old. How old, insofar as definite views are concerned, I am not prepared to say. We find obscure reference in Dio Cassius and Virgil; in the fifteenth century the notion is better defined. Hancock, in 1821, "Researches Into the Law and Phenomena of Pestilence," relates a number of supposed observations, and quotes opinions. Sydenham, I believe, definitely states that persons practically well harbor the poison. Since 1870 the matter has been developed along exact lines, and the really advanced view is this: We all harbor pathogenic micro-organisms within and upon our bodies. They are lodgers merely; we have adapted ourselves to them, and they to us, as lodgers. Under certain, as yet unknown, conditions, these lodgers cause, or help to bring about, disease, varying from the slightest febrile disturbance that the host is hardly aware of, to the extreme that destroys life within a few hours after the apparent onset. All and singular, so-called, pathognomonic symptoms may be absent in both instances. Slight indispositions, sore throats, colds, febrile headaches and backaches, coryza, chill with quick rise of temperature and quick subsidence, mark transient invasions of the human organism, or host, by lodger-

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parasites possessed of pathogenic power. About twenty-five years ago I began to consider the matter of infectious disease along these lines, and my observations during the past twenty years, in one and the same community, have confirmed me in my views. In 1897 my first paper on the subject was published in the Transactions of the Wisconsin State Medical Society. In 1907 I again presented my views in a short and sharp manner under the head of "discussion," as a protest against the assumptions and presumptions of health officers.

In 1897 I was not aware that the subject had ever been handled along the lines of the evolutionist. My training and studies had not been such as to fit me for the big task. In the same year in which I first presented my views, Gottstein published his "Allgemeine Epidemilogie," and Reibmayr his "Inzucht und Vermischung."

These two books cover the ground of infectious disease from the advanced modern, evolutionary standpoint; and with Reibmayr's "Die Ene Tuberculoser" should be in the library of every physician who has hygiene, "I mean true Hygiene," at heart.

From the standpoint of the evolutionist the doctrine of Immunity and Immunization, as at present propounded, is, to put it mildly, a delusion, a snare and farce.

A non-pregnant female may copulate with a male from one to a hundred, or more times, and not conceive. Then cohabitation with the same male, conception, normal pregnancy and young. No physician in his senses would say, that because a woman had copulated a number of times under normal conditions with her husband and not conceived she could not be impregnated.* We know better than that. Cause and effect as finalities have no existence in nature. The phenomena we observe are but sequences in a long chain of events. So far as I can see, the heredity of acquired peculiarities is inexplainable. In re human tuberculosis and dairy cattle and the "Hurrah campaign" of bacteriologists, it is interesting to note that the big dairy counties of Wisconsin have not the largest death rate from tuberculosis, and what is still more significant, the State statistics, if anything, disprove a relationship between bovine and human tuberculosis.

ALBERT F. FUCHS, M.D.

Loyal, Wis.

*Is she "immune" to the sperm cell ! !

The Business Side

OF MEDICAL PRACTICE

While we, as physicians, desire to be scientific students and practitioners of medicine, yet we desire also, for the welfare of our dependent ones and for the sake of our standing in the community, to secure a fair compensation for the services we render to our fellowmen.

An Outlet for Your Spare Time and Capital.

It is comparatively easy for the doctor, as a recreation from his practice, to have his favorite hobby or fad combined with an investment outlet, if he will but study the opportunities of his region. In former issues we have spoken of the advantages of cultivating medicinal plants, such as golden seal, ginseng and a number of others. We have also shown the oportunities in fruit and nut culture, some of which will show special advantages in almost any part of our country. We have also shown the advantage of the doctor's investing whatever sum he wishes to put into industrial or manufacturing operations as nearly as possible in his own community.

Following up this idea of the doctor's having a scientific hobby, which may also be profitable, we suggest the fact that in the not distant future we will be producing furs from fur-bearing animals raised in comparative domesticity, just as we are raising wool, leather and meat producing domestic animals. The United States Government is making experiments along all these lines. There seems to be an unusually promising outlet for one's activity and a little capital in the culture of silver foxes, muskrats and perhaps of seals, and certainly the idea will rapidly be extended to other fur-bearing animals. Already several farms of silver foxes are far beyond the experimental stage and are proving quite profitable. The first thought was that an enormous range was necessary, but that has been quickly disipated by experiment, it being found that a few acres are quite sufficient when properly administered. These are only hints thrown out, which should lead to interesting developments along many lines.

Clearing Out the Swindlers.

It is a matter of congratulation and the basis for hope for better dealing in the future that the Post Office Department is

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making use of its technical power to close up as rapidly as possible flagrant swindles that are making use of the mails in reaching victims throughout the country. One after another they are closing them up and putting the promoters behind the bars.

The Inter-Trust Security Company, of Boston, was recently raided by the Post Office Department and its officers taken into custody on the charge of using the mails in a scheme to defraud.

The company controlled the Rawhide Boston Mining Company, Nevada-Boston Mining Company, United States Gold Mining Company, Victor M. Weil Exploration Company, Howell Little Mining Company, and Standard Amalgamated Exploration Corporation.

The properties are located in Nevada and California, but the government asserts that no attempt has ever been made to develop them.

Also on January 11 the department closed the New England Investment Company and arrested Joseph DeChamplain, its president, charged with using the mails to defraud, claiming that French Canadians have paid $668,000 for stocks in seven different companies of which the New England Investment Company was the holding company. The companies controlled by the New England Investment Company are:

Kaolin Putty Corporation, of Salem, Mass., $100,000; Dunstable Granite Company, of Dunstable, Mass, $50,000; Le Revoil Publishing Company, of Manchester, Lowell and Lawrence, $100,000; Laconia Coal and Ice Company, of Laconia, N. H., $50,000; Manchester Coal and Ice Company, Manchester, N. H., $25,000; Belknap Mills Corporation, of Laconia, $300,000; American Pickling Company, of Providence, $60,000.

Tell Your People.

Doctor, you owe it to your clientele to inform them of the character of the swindles that are drawing their money and thus making your community poorer to that extent. Carry the news around with you. Furnish it to your county paper—the editor would be glad to help warn the people if the matter were put up to him. By cutting off their supply these dishonest promoters could soon be forced out of business. They live only by the credulity of the ignorant. Publicity destroys them as the sun destroys the mold.

In view of the activity of the Post Office Department in closing up fraudulent promotions, it would be well, when you receive any such literature, to enclose it, envelope and all, in your own envelope, and forward it to the Postmaster General, Washington, D. C., inviting his attention to it.

Notes and Comments.

Eastern Pennsylvania seems to be a rich field for stock promotion. We have been informed that Telegraphophone stock to the extent of about two hundred thousand dollars was placed by the Sterling Debenture Company in and around Lancaster county alone. This was several years ago, and the stockholders are still waiting for returns. Now it seems that the Atlantic and Gulf Portland Cement Company are selling bonds with a bonus in stock throughout Eastern Pennsylvania. Their literature seems to be characterized by what a prudent person would call considerable exaggeration.

There is a great effort now going on throughout the country to sell land in Florida, based upon the many recent publications regarding the wonderful returns from various fruit and vegetables grown there. So far as this land is being purchased by those who expect to go there in person and cultivate it, and especially if they have seen the land itself and become fully convinced that it is valuable land, this movement is favorable. However, there will be a great deal of lamenting in the next few years on the part of absentee purchasers and others who, buying without seeing, find when they take possession that the land is absolutely not as represented, but is a barren waste. Florida has some of the best as well as some of the most barren land in the United States. It is absolutely necessary that you see the land and know its value before buying; otherwise you are nearly sure to be badly stung.

A subscriber in Cleveland, Ohio, asks us in regard to the land proposition known as "Estates of Wading River," the land being located on Long Island, and the promotion being put out by W. C. Reeves & Co., 124 East Twenty-third street, New York city. We would not advise investing in them unless going to see the lots. There is a great deal of unfavorable promotion being put

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forward on Long Island property, which, many times, is a swamp or under water. It is always safe to see your land first. If you cannot do that you had better keep your money.

Many physicians have been solicited to invest in the stock of the Oxford Linen Mills, put forth by the Sterling Debenture Corporation—the same company that sold Telegraphone stock and others of similar character. If you get an expert examiner to investigate he will find it a grossly over-capitalized concern—at $1,333 per spindle instead of $25 per spindle, the cost of building an ordinary cotton or linen mill. Also, if he will compare reports he will find that, for the year ending July, 1909, nearly $600,000 worth of treasury stock was sold, which is accounted for in the annual report *by arbitrarily marking up the value of the patents, rights, etc.*, held by the company to that amount. The report for 1908 gave "Patents, rights, etc., $750,000," that for 1909 gave the same item at $1,411,591. Do you want to invest in Oxford Linen, or in any Sterling Debenture flotation?

A subscriber in Jeffersonville, Ind., asked about the "Acme" and "Ben Harrison" mines, in the State of Washington, and the "Austin Consolidated" mines of Nevada. He states that many thousands of dollars have been invested in them in his locality, and that two years have passed and no returns have materialized. Any reader having information will confer a favor by reporting to us.

The Standard Securities Company (otherwise said to be A. L. Wisner & Co.), of New York, offer Midway Oil stock. It would be just as well to hold off until you see good reason for investing.

H. L. Barber & Co., Chicago, offer, among other things, oil stocks. If you keep your money you will still have it.

A subscriber in Chicago writes us asking for advice regarding the pecan orchard located in the Yazoo Valley, in Mississippi, and operated by R. L. Biles & Co., St. Louis, Mo.

While we are not personally cognizant of this particular promotion, yet we believe that it would be better for the doctor to take $100 out of his $2700 which he proposes to invest and go direct to the Yazoo Valley and find out all the facts himself. Especially he should find out at what price he can buy land there as a private purchaser, and at what price he can have the trees set out under his own direction. In our opinion it would be better for him to get four or five others interested with him, combine their capital and employ one manager to take charge of the operation, and thus make sure that it is a safe investment and that whatever profits there may be in the plan would be their own. At any rate, do not buy until you have seen the actual ground itself.

We are still receiving a great many inquiries from physicians enclosing circulars of The Fortune Colony, in which wonderful dividends are figured out upon the basis of what old life insurance companies have done. As we have said before, we do not believe that your fortune is to be found in the "Fortune Colony." Fire Insurance is a business attended by considerable risk, even to those who are expert in management. Over two hundred and fifty new companies have been organized in the past year. Possibly five of them may survive.

A subscriber in North Dakota asks our advice in regard to the Jantha Plantation Company, alleged to be conducting a banana plantation at Macineso, Mexico. We know of a number of these Mexican plantations, but do not know of one which has yet achieved success sufficient to encourage investment in any others. Your money is safer in your own neighborhood than it is in any Mexican plantation.

A subscriber asks in regard to the Federal Land Investment Company, Houston, Texas. This company has a great many tracts of land to sell, and some of them look like they might be a good purchase. However, we see no reason to advise any reader to invest in their Alvindale Orange Orchard nor any other similar proposition where the company agrees to plant and cultivate the land for you, unless you can take time to go to the place and investigate the proposition yourself.

Some of the traps set for doctors' dollars are very ingenious. For example, Dr. F. S. Browne has kindly forwarded us a com-

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munication from Wm. H. Sills, of Chicago, in which Mr. Sills encloses a copy of a confidential letter received from his friend, Mr. Cacey, revealing the wonderful oil producing wells in Louisiana.

Mr. Sills offers to Dr. Browne to come in with him on this bonanza, based upon this confidential letter. We have no means of knowing as to whether the Cacey communication was genuine or not. Of course, a physician of judgment will require more convincing proofs than such a communication shows.

Dr. G. Morton, of Lancaster, Ohio, forwarded us a letter sent him from E. H. Abodie regarding the wonderful Arkansas Diamond mines. We think it would be well for anyone expecting to invest to actually go and see the mines first.

A subscriber asks about the stock proposition offered by the Western Magazine Pub. Co., St. Louis, Mo.

All we can say is, that the business of publishing a magazine is a very risky one indeed, and the failures are many, even where the parties have large capital of their own. When they have to go to the small investor for capital the chances are hardly one to ten that the money will ever come back again. Keep out.

To The Medical Council:

You have no idea how I appreciate your snappy little journal, and especially since you are showing up the many fake investment concerns. I am enclosing a letter which I have received, along with a lot of literature, that is so false and misleading that I hardly think any doctor would be foolish enough to invest. I happen to know something about this "nut business," and I know that their statements are absolutely false in every respect.

M. L. Chadman, M.D.

Lancaster, Pa.

The doctor accompanies this with the circulars of the Southern Nut and Fruit Company, Rooms 402-404 World Building, New York. They make a very appealing letter, assuring him that if he will put $200 a year, for three and one-half years, into their Pecan Orchard scheme, he will realize therefrom an income equal to 6 per cent. on $65,000. The title of the circular is "How To Build a Fortune In a Short Time." Of course, all of The Medical Council readers will hurry at once to secure some of this rare good "fortune."

We apologize to our readers for devoting most of this department this month to the subject of investments. We have in previous years covered a great deal of constructive work, as to building up practice, etc., and just now the number of fake schemes that are afloat makes it absolutely necessary that we should give some attention to them until they have been pretty thoroughly covered.

Doctor, be a true sport and let us have reports of some of the financial schemes in which you were tempted until you yielded. The warning of actual example would help our readers very much. We will not publish your name if you prefer not.

"A Man who is quick to answer his telephone can be put down as a good business man, and when a merchant or other business man is slow to get to the instrument, he will be slow to get to other things, including money."

Many of our subscribers have been solicited to invest in the American Telegraph Typewriter Company. We believe the machine to be a good invention, but we do not like the nature of the literature put forth by the selling company. They have now apparently abandoned the mail route and are sending through agents. If one comes to you, ask him how much the fiscal agents, Beech & Co., keep for selling the stock, and how much is handed over to the company to manufacture the 5,000 machines for which they say they have orders—and also why these 5,000 orders have not been increased within the past four months.

A medical friend of ours in Plymouth County has this sentiment conspicuously posted in his office:

* * * * * * * * * * * * *
* Man is Made of Dust. *
* Dust Settles. *
* Be a Man! *
* * * * * * * * * * * * *

—Annals of Gynecology.

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"Quien Tien Tienda Que Atienda."

This old proverb, "Keep thy shop and thy shop will keep thee," is supposed to be especially applicable to the physician. Sometimes we doubt it and the reason is not far to find. Probably one of the most amusing of gatherings is a great international medical meeting. The delegates are chiefly men who have done things and are inclined to be "sot in their sotness," and their gray heads jerk and their thin arms wave most vehemently over academic contentions that do not excite the average doctor in the least. But very few of these worthies have large practices and very few indeed save any money. The city physician who must watch carefully that nothing gets by him, and most city practitioners become experts at this, keep shop under their hats or by wire during the hours not printed upon their cards. It is hard for the student and highly specialized physician to realize that he has something to sell and that he keeps a shop. True, he is selling skill and knowledge, but they are goods hard for the public to judge. Hence, the people go to the store where they are courteously treated and where they know the proprietor as a *man* and not as a mere merchant. They also go to see the physician who is considerate and whom they know as a *man* and not as a mere doctor.

This thing of becoming a *man* is a big job. It takes time and requires a very wide interest in life and a large amount of effort and study apart from our own little sphere of activity. One must be away from his office both physically and mentally if he wants to grow into the similitude of *real human manhood*. And have you observed that people will wait or come again for that kind of a doctor?

It has been our observation that the country practitioner who is away from his office and out among men a great portion of his waking hours usually grows into a most likeable sort of man. Also the city physician who is a good mixer and who keeps in touch with men and affairs becomes a most pleasant and tolerant companion. The medical office should never be a cloister.

In the Language of the Evergreen.

Doctor, if fate seems against you, don't "Pine away"—"Spruce up."

A Reliable Collecting Agency.

In our last issue we published an inquiry from a subscriber regarding the Bonded Rapid Collecting Agency. We have made a thorough investigation and believe the company to be reliable and to be doing satisfactory work for its clients. We have word from several physicians, for whom they have done business, expressing entire satisfaction with their work. It gives us pleasure to accord them the credit due them for the satisfactory fulfilment of their promises.

We have an inquiry from a subscriber regarding the American Mercantile Company of Lowell, Mass., as a collection agency. We should like to hear from any who have had experience with them. It may be well to mention here that the inquirer states that the company requires a membership fee of $25, good for three years, to be paid out of the first money collected. We have never favored the membership plan in collecting agencies, although there is nothing illegal about it. We should be pleased to hear from our readers in regard to this company.

General Practitioners Suffer.

There are many men in our cities with a wife and two or three children who can just make ends meet. Their incomes have increased as they have grown older, but, unfortunately, year after year the cost of living has steadily gone up and the mortgage on the house is still as menacing and hungry as it was ten years ago.—N. Y. State Jr. of Med., Dec., 1909.

Jottings By The Way.

When planning to change your location, don't forget that:

A licked stamp can cross the continent by mail, but a licked male must pay the freight.

While "a rolling stone gathers no moss," it is apt to "start something"—creditors or gossip, perhaps.

If "home, sweet home," becomes infected with the yeast of *discontent*, the new home may sour from the same cause.

If you can't get a board, it does no good to rail. Buck up and try again—before you move.

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You may move from relations, but you cannot get away from yourself.

The new place may have a better climate, but human nature and human disease will be just the same.

If your bluff has been nailed where you are, it is a poor plan to pry it up and take it along in the moving van.

When inclined to lament the decline of the golden days of the conscript fathers in medicine, it might be well to remember that nondescript sons and postscript daughters are found in the profession.

Persimmons and hard nuts are the only things ripened by frost—and they grow too high to reach. Oranges and peaches ripen in the sun. Try a little sunshine where you are and if you find there are only human persimmons and hard nuts to appreciate it; then, you would better move.

But

"Look before you leap, and if you do leap don't wait until all the jump is out of you."

Don't take a hammer along. Boost your new town and the town will boost you.

Sell your rusty instruments and lose your rusty ideas before you move. Junk does not pay to pack and freight.

Don't imagine that suckers are never caught in the new town. Real estate agents use different bait for the newcomer and—different real estate.

Don't build your air castles too high: some one is apt to capitalize them by flying a kite from them with *you* as the tail.

Keep your wife and daughters amused in the new place. If you let them get the dumps they may make easy friends, but the *wrong* ones.

Old family exclusiveness will not aid a newcomer. Better leave it in the old family closet back home to keep the skeleton company.

Join the medical society when you arrive. Your competitors will take your measure any way, and they had better get it at first hand. The new suit will fit better than if ordered by mail.

Your boy will probably be licked by some of his new playmates. Your competitors will do the same by you; but both the kid and yourself will be the better for it. Be a good fighter but a good loser, and you will make friends.

Religious and political prejudices are two things it is not well to be too sure of when moving. Put them in cold storage until you learn the lay of the land. Meanwhile, if you forget them no one will be the worse off.

The new neighbors will have their eyes upon you. You could publicly take an occasional drink back home and even use an occasional cuss word, but intemperance and profanity are monstrous sins when seen in the newcomer.

In a previous issue we spoke of a new antiseptic agent, called Benetol, which promised wonderful things, and said that we would watch its progress and keep our readers informed of future developments. Well, some developments have come, and we advise our readers to go slowly. As it is being proclaimed in newspaper space as a cure-all for cancer, tuberculosis, typhoid fever, leprosy, chronic catarrh of the stomach, eczema, blood-poisoning, hemorrhoids, and pyocyaneous infection, when it possesses only the germicidal properties of carbolic acid or lysol, it would be well for us to wait and see whether or not it is good for anything.

Cheer Up.

We have been reading pessimistic articles about the decay of medical practice until we are tired of the subject. The man with tears in his eyes cannot see clearly and the chap looking for perfection finds little of it, but is fitted with glasses magnifying defects. There was once a farmer from whose front yard a beautiful vista of stream and mountain stretched away to the distance. A railroad constructed a long fill shutting off all of his view, and a friend suggested that he sue the company for damages to his outlook. Somewhat to the surprise of his friend he remarked: "What is a mere view compared to the advantages of having passing trains to look at every day?"

Perhaps the farmer was not so far wrong. We get so used to a fine outlook and the grandiloquent talk about the great unselfishness of our exalted calling that we long for a little local excitement close enough for us to see without leaving our work. Very few men are like the late Count Tolstoi, who could live upon exalted thought and brooding upon the wrongs of the other fellow and go barefoot while he was doing the same. The President's Housing Commission told much of the isolation

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of the farmer's wife with her round of duties. We need a commission to take up the isolation and discouragements of the average doctor and devise some plan giving the man who is doing the hard work of fighting real disease some stimulating outside interests and something to cheer him up. But we will not get such a commission: it is up to us. The man whose greatest ambition close at hand is to get a chance to go to sleep may dream, but his dreams do not come true when he awakes.

"Mr. Anonymous," one of the greatest of real poets, once said:

"Why cow! How canst thou be so satisfied, so well content with all things here below;
So optimistic and so sleepy-eyed, so meek, so lazy and so awful slow?
Dost thou not know that everything is mixed,
That grieviously the world needs to be fixed;
That love is folly, friendship but a snare? The cud thou chewest is not what it seems.
Get up and moo, tear 'round and quit thy dreams."

Truly, "the simple life" will do for a cow and possibly for a few people, but most of us get more fun out of life "tearing 'round." And herein is a suggestion for the discouraged doctor.

Most discouraged doctors are too self-centered; some of them are too conscientious; all of them have a too circumscribed life. We are in need of human interests that do not have to do with pain and sorrow. A doctor is not necessarily a foreign missionary nor a propagandist for all good reforms. These things are all right, but we owe it to ourselves and our families to do a little like other people who must make their own living. The world will think the better of us if we look out a little more for "number one." And perhaps if we do we will be in a better position to do the great good that we hear so much about. We do not need to hedge our work about with so many conventions. We are entitled to make investments and to personally look after them. Other business men do so. We let our medical work get upon our nerves. Constant care of sick people makes a mope of a doctor and he becomes discouraged. The fact that the most busy of physicians are often the most discouraged testifies to the fact that our calling is one that should have limited hours. If you cannot make a good living exclusively from your practice why should you hesitate to have some profitable side issue? Cheer up; the world is big.

BEST IDEAS FROM RECENT LITERATURE

"The Peril That Walketh By Night."

Modern science has shown this peril to be very largely mosquitoes that carry malaria and yellow fever, certain vermin that may convey a limited number of diseases, rats that carry bubonic plague, miasmatic fogs or vapors and bad ventilation.

Now we must indict the bed itself since an epidemic form of dermatitis has been traced to the straw mattress. Many cases have occurred in Philadelphia and in the counties west of it since May, 1909. Schamburg (*Phila. Med. Jour.*, July 6, 1901) first described the disease, and one of the most recent contributions is by Goldberg (U. S. Public Health Reports, Vol. XXIV, No. 28), who calls the disease urticarioid dermatitis. He has demonstrated the fact that the bite of the pediculoides ventricosus, a mite infesting the straw of wheat, oats and rye, is responsible for the disease, which occurs from May to October in the temperate zone.

The disease is characterized by a hive-like eruption and occurs in wheals with a small central vesicle and often with pustular contents. The eruption is of a rose color, the wheals being larger than those of hives but lacking the anemic area of the latter disease. There is intolerable night itching, but which continues in a lesser degree during the day. There is a temperature range from 99 degrees F. to 102 degrees. Occasionally an enlargement of the lymph glands has been noted. The disease may be confounded with hives, chickenpox and scabies.

Sulphur fumes kill the mite and the local application thus far found most efficacious is as follows: betanaphthol, grains 30; precipitated sulphur, 1 drachm; benzoinated lard, 1 ounce.

Bedsores.

Wash frequently with a solution consisting of two drams of ammonium chloride, 4 ounces of water and 12 ounces of alcohol. Dry gently and powder with stearate of zinc.

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Open Air Treatment of Burns.

This treatment is especially valuable in extensive burns, but with slight modification may serve well in all surface burns, in the experience of Dr. David St. John, Hackensack, N. J. (*American Journal of Surgery,* August 19, 1910), because by it the patient experiences the minimum of pain, requires the simplest dressings, and there is the least interference with the natural reparative processes.

In the older methods of treatment extensive dressings materially add to the suffering by causing pain, by destroying granulations, and by favoring the absorption of toxic matter. These features are all obviated by the open air method.

The treatment necessarily varies with individual cases, the temperature of the room, the season, and the facilities at the command of the surgeon. After administering a hypodermic of morphine for pain and otherwise aiming at absolute quiet every danger of a shock must be guarded against.

If the back is chiefly involved the patient should be placed on a water-bed without cleansing the skin. If the weather is warm as much of the body as is prudent may be left uncovered, preferably exposed to the sunlight.

In winter, cradles are placed over him, and over these are spread blankets, leaving the body untouched; the face is left exposed, and the tent-like cover is so arranged as to fit snugly about the neck. This arrangement can be modified by using glass elevated over the burn, in combination with the blanket covering, thus making use of sunlight, even when the temperature of the ward requires suitable covering.

Beneath the bed can be hung an electrical heater—preferably a radiator-like affair—the heat being led up over the side or foot of the bed by metal or canvas funnels; reinforced with wire, these funnels open into the tent where a thermometer can be kept, and the temperature thus regulated so as to preserve the body heat. The warm air as it expands is readily led away by an opening near the top of the covering, and thus a current of warm air can be obtained indefinitely.

In this manner the patient is left for a few days as undisturbed as possible, on a fluid diet, with special attention to increasing the activities of the natural channels of elimination. Rectal irrigations, in cases where shock is marked, are found to be of benefit, and where evidences of toxic absorption are present. These are given regularly every three or four hours, in such a way as least to disturb the patient.

Areas that do not scab over quickly are best left undressed. Unless there is marked pocketing of pus under the scabs with evidences of absorption—the temperature curve and polynuclear count being used as guides—the scales are left alone. If too much lifting, draining and cutting away of dried secretions is done, all of which is painful, the patient becomes worn out with extensive dressings.

As soon as the granulations lift, dried exudate and old skin can be easily softened with some bland wash, and painlessly removed. If the granulations are healthy they can be criss-crossed with sterile adhesive plaster strips, leaving ample space between the strips. These areas seem to do better with only a light gauze or no dressing at all. When gauze is used at all its best services is that of an absorbent.

Important Facts in Dietetics.

Upon returning home from his visit to America, where he made a study of recent research in our laboratories on the subject of dietetics, Dr. Bryce wrote up his observations and conclusions (*British Medical Journal,* December 11, 1909), from which we abstract, in substance only, the fact of most vital importance.

On the doctrine of moderation in all things, now centuries old, all reformers agree. All specific limitations have their early advantages. These are by no means always permanent. The greatest advantage here is well claimed by the abstainers from meat.

From thirty years' observation on thousands of patients and attendants in Battle Creek Sanitarium, Kellogg contends that the folowing obvious advantages are rapidly brought about: (1) Clearing the skin, the disappearance of skin eruptions, sallowness, etc., and rapid improvement in color and texture of the skin; (2) improvement in the blood count and in the hemoglobin, 12 per cent. in the former and 15 per cent. in the latter; (3) a notable fall in blood-pressure, from an average of 181 to 158 mm. Hg. in a fortnight's time. As no pressure-lowering drugs were administered, he attributed this fall to the suppression of pressure-raising toxins produced in the alimentary canal, and the better elimination of tissue wastes.

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A great disadvantage of a meat diet lies in the fact that protein requires so large an expenditure of energy in its digestion and utilization. Fats require only 2½ per cent. of the total energy represented, whereas that required for starch is 10 per cent. and that for protein is 16 per cent. The burden thrown upon the liver and kidneys by excreting the excessive quantities of urea and uric acid on a high protein meat diet is at least four times greater than that on a low protein, fleshless one, and there is a marked diminution of the alkalinity of the blood. This results in deficient oxidation of protein and accumulation of waste products in the blood and tissues.

These are of a highly complex character, taxing the kidneys, liver, adrenals, thyroids, and other organs, whereas the metabolism of fats and carbo-hydrates simply produces CO_2 H_2O, which are easily eliminated without harm. He has frequently shown that intestinal putrefaction is directly proportional to the amount of protein in the dietary, as much as twenty times the amount of indol in the feces and indican in the urine being produced by low protein fleshless feeders who were put on a high protein meat diet. At the same time they displayed symptoms due to this increase of protein, such as headache, loss of appetite, loss of energy, and general malaise.

Flesh foods contain, on an average, 200,000,000 putrefactive bacteria in every gramme, so that it is appalling to think of the number one swallows in the course of a day. It is comforting to think that nature has provided the body with many defences against this terrible risk of poisoning, the most important, of course, being in the hydrochloric acid of the gastric juice, and the maintenacne of the effective digestive capacity in the stomach and small intestine. has provided the body with many defenses

Excessive as our dietary seems to be, it is easy of demonstration that the average man subsists upon a daily ration of low caloric value—from 1,650 to 2,500, while most authorities claim it should be 3,000, 4,000, and even 5,000 calorics.

Psoriasis.

Hutchinson's favorite local treatment is acidi chrysophanici, hydrarg. ammon., of each grs. x.: liq. carbonis detergens, mx; adeps benzoat, ʒi. Remove all scales, as far as possible, by washing or a warm bath, and then rub the ointment into each patch for half an hour at bedtime. The ointment may be left on all night, but if this is disagreeable it may be wiped (not washed) off.

Diagnostic Significance of Oral Symptoms.

Until recently this subject did not receive the large attention it merits from either the medical or the dental practician, Dr. V. A. Latham, Chicago, observed (*Jour. A. M. A.*, October 1, 1910), being only touched upon incidentally in text-books in treating of individual diseases. From the diagnostic viewpoint, the subject has importance second to none in the whole clinical field.

The tongue has often been called the mirror of the stomach, and we may say that the mouth is the mirror of most of the infectious diseases and of the general intoxications of the body. This is especially true in conditions of anemia and other chronic diseases which, lately, in many countries, occurring in the practice of the physicians, have been referred to the dental specialist for a report.

The condition of the oral cavity is a most important factor in surgery as an aid to antisepis and sepsis. It is fully as important to the general practician as to the stomatologist and the dentist. This is evident by a mere glance at the following grouping of constitutional and local diseases, mirrored actually or primarily, in the mouth:

1. Interstitial gingivitis.
2. Syphilis—Leukoplakia.
3. Tuberculosis.
4. Scurvy.
5. Purpura hemorrhagica.
6. Diabetes mellitus.
7. Addison's disease.
8. Stomatitis (several forms).
9. Noma.
10. Ludwig's angina.
11. Aphthae.
12. Herpes.
13. Metallic poisons.
14. Rheumatism.

1. Traumatic inflammation.
2. Epulis, Fibroma, etc.
3. Polypi, simple hypertrophy.
4. Parulis or alveolar abscess.
5. Papillary and warty growths, chancres.
6. Vascular or nevoid growths.
7. General hypertrophy, hyperplasia.
8. Carcinoma.
9. Sarcoma.
10. Gingivitis, interstitial alveolitis, pyorrhea.

Investigation of Time Taken By Food To Pass Through the Alimentary Canal.

Considering that it is of equal clinical importance with the daily number of a patient's stools, it is surprising that so little attention is given to the time required by food to pass through the alimentary canal, Dr. George Herschell, of London, writes (*The Lancet*, May 21, 1910):

"For instance, it is not at all unusual for a patient to have one stool a day and in consequence consider the bowels to be regular, whilst all the time there is a latent constipation with retention of fecal matter, giving rise to chronic ill-health from auto-intoxication."

The charcoal or carmine capsule test is cited as of universal application. The fol-

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lowing summary shows the clinical facts of importance and how the test reveals them:

(1) In cases of diarrhea the passage of the charcoal in the normal time would tend to show that the peristalsis in the small intestine was not increased and that the disturbance was in the lower portion of the large intestine.

(2) In diarrhea the quick appearance of the charcoal or carmine in the stools would suggest that the trouble was in the small intestine or ascending colon.

(3) In a patient who has daily motions a dose of charcoal given at breakfast should appear in the next morning's stool. If it fails to do so there is latent constipation. If, after the stool lavage of the sigmoid brings away black feces, there is retention in the lower bowel. If it does not do so the delay is in the cecum, ascending, or transverse colon.

(4) In a patient who does not have a daily motion the removal of black feces by lavage of the sigmoid on the morning following the administration of the cachet would show that atony or dilatation of the lower bowel was an important factor in the production of constipation.

(5) Appearance of black stools for several days after the administration of a dose of charcoal will point to atony of the bowel and latent constipation.

(6) By administering a dose of charcoal or carmine at the commencement of a test intestinal diet, we are able to mark off the moment when it commences to appear in the stools, and when we may safely use them for purposes of examination.

(7) We may mark off and obtain the total feces corresponding to a test diet extending over a fixed period by giving a carmine cachet at its commencement and termination (provided that there is no latent constipation).

Varicose Ulcer.

Clean thoroughly with green soap or peroxide of hydrogen, apply gauze saturated in a 5 to 10 per cent. solution of silver nitrate and cover with woven elastic bandage. Gauze should be made damp with solution three or four times a day.

Try Fowler's solution in increasing doses to the limit of tolerance in those asthmatics who suffer from very frequent paroxysms. You will be surprised at the results. Begin with one minim doses directly after meals *in a lot of water*—half to one tumbler full. Add a drop to the dose every day until you get the t. i. d. dose up to about 15 minims. Watch for edema about the eyes, diarrhea, nausea, cramps, vomiting, neuritis, etc.

Succinamid of Mercury a Failure in Tuberculosis.

In a paper in *The Medical Record*, Dr. Leroy S. Peters, of Silver City, N. M., demonstrates completely that which had been shown before, that the employment of this mercury salt has no value in tuberculosis, excepting, of course, those cases complicated by syphilis, in which it favorably affects the syphilitic element of the case. It is important not to waste time with this drug.

The Ehrlich-Hata Remedy.

Our readers are anxious for the latest word in regard to this remedy, from which the world hopes so much. From the mass of experiments many facts are gradually coming to light, but it will be some time before this drug will settle down to its proper place in therapeutics. To give an idea of the conflicting opinions existing among experts regarding it, we quote from some recent papers.

In the *Medical Record* of January 14, Dr. Samuel W. Lambert, of New York, reporting the results in five cases, four being very favorably affected, concludes as follows:

The general conclusion to be formed from these cases is an endorsement of the universal verdict of medical observers, that Ehrlich has added a remarkable remedy to the treatment of syphilis and has formulated a new idea in parasitic specific therapeutics.

Dr. Edmund H. Mensing, of Chicago, in a paper in *Chicago Medical Recorder*, gives the following summary:

1. 606 is a specific for syphilis, and should be used in all cases, save those possessing organic lesions, especially the advanced nervous and vascular disorders, and optic nerve disturbances.
2. At present, apparently the best results are obtained when the neutral or slightly alkaline suspension is injected into the gluteal muscles.
3. It probably inhibits to a certain extent an advance of the nervous degeneration in the parasyphilitic diseases, general paresis and tabes.
4. It is impossible to state at present whether one injection absolutely cures; furthermore, we do not know whether it renders the patient immune to the parasyphilitic diseases.
5. The whole question of treatment with 606 should be treated with considerable conservatism because the most recent reports show a greater number of relapses than was at first anticipated.

Dr. Louis Hart Marks, of Frankfort, Germany, in an article in the *Jour. A. M. A.*, gives the following conclusion:

It should be mentioned again that "606" is a powerful medicinal agent, and it should be used

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only after the various technics have been thoroughly studied and mastered. It will never be a drug that can be used altogether in office practice like the frequent injections of the different mercurial salts; and the greatest caution must be exercised by those who use it, after it is given to the medical profession at large. An unattainable ideal would be to have the drug used only by trained genito-urinary specialists, just as a laparotomy is performed to-day only by a surgeon.

Dr. William T. Corlett, of Cleveland, O., in reporting eight cases treated with this drug, concludes with the following observations:

Bearing in mind the clinical experience of previous preparations of arsenic, and after observing the effect of arsenobenzol during a period of eight weeks, one may formulate the following recommendations concerning its present use: first, the drug seems to have a special field in malignant cases that do not do well with other forms of treatment and in which a fatal termination is imminent; second, in the primary invasions of certain selected cases before full systemic intoxication has taken place. Again in ambulatory patients, such as one frequently encounters in clinics, who follow no systematic or protracted course of treatment. In this class of course come the *prostituées*. If, as seems now highly possible, a single dose will destroy the *fons et origo* of syphilis or inhibit its activity, it will be more efficient than any quarantine or other system of regulation thus far devised.

The possible disadvantages to be borne in mind are: the uncertainty as to the final outcome of the disease, and the possible dangers that may occur from its use, such as have been known from other chemical forms of arsenic.

Finally, when the drug becomes commercialized, it is doubtful how much good it will do, or whether the good will be greater than the harm. Thus far cases have been selected with great care and tested by the Wassermann reaction preceding its administration, and it seems at this psychic moment almost heresy to even offer a word of warning, but when it comes in more general use and may be given to anybody suspected of being infected with syphilis it will be indeed strange if, in the use of a drug so potent, serious complications do not ensue.

In a paper in the *Jour. A. M. A.*, Dr. Henry L. Elsner, of Syracuse, N. Y., reaches the following conclusions:

My experience with the remedy as I saw it used abroad and in my own private and hospital practice justifies the following conclusions:

1. The treponema, otherwise known as the *Spirochæta pallida*, is positively destroyed and the living contagion of syphilis is promptly removed by the Ehrlich-Hata remedy.

2. The preparation "606" promptly and favorably affects visible and palpable syphilitic lesions. It also removes deep-seated gummata.

3. The remedy stays the destructive and onward march of syphilitic ulcerations and causes their healing in a surprisingly short time.

4. It is more rapid in its effect on specific disease than any other known remedy.

5. It is likely to prove more valuable than any other remedy in the treatment of the specific diseases of most internal organs.

6. It cannot replace cicatricial tissue, the result of nature's reparative processes; neither does it affect favorably chronic degenerative diseases of the nervous system, such as paresis, system-diseases of the cord, in which there is a break in the continuity of nerve structure, though in some cases it seems to influence favorably the continuous crises of locomotor ataxia.

7. In all cases it causes a leukocytosis and the formation of antibodies.

8. It materially modifies, and in most cases ultimately negatives, the Wassermann reaction.

9. It unquestionably floods the circulation with endotoxins resulting from the death of millions of spirochetes, and in all probability an antitoxin is developed in the blood-serum. These facts must be thoroughly considered in connection with the treatment.

10. In acute and threatening deposits in vital organs the effect of "606" will often prove life-saving because of its prompt action, and for that reason it is preferable to the iodids or mercury.

11. It ought not to be given to ambulatory patients; neither is it safe in the hands of the careless or those who have not seen it used and learned the difficult method of its preparation for injection.

12. The hospital, where all things required in the preparation of the mixture of "606" can be sterilized, and where the centrifuge can be used, is preferable to any other place for its injection.

13. Patients injected should be kept quiet and in bed during seven days under close observation, and for a longer period if indications demand.

14. Second injections, if indicated, should not be given in less than eight weeks after the first.

15. Contra-indications should be carefully considered before using the remedy. Patients with any other infection than that of syphilis should not be injected, however mild the former may be, until a safe period has elapsed after their recovery; neither should the feeble or old or those with other than syphilitic organic disease be injected.

16. Congenital syphilis demands the treatment, either directly or indirectly, as suggested in the paper.

17. The living contagion is destroyed by "606"; hence its early use can prevent the spread of syphilis. This subject demands the immediate attention of sanitarians and those directly interested in public health.

18. In occasional well-selected cases the use of the iodids after the method of Wechselmann will increase the efficacy of "606" when second injections are necessary. From two to three weeks should lapse after thorough mercurial treatment, when this has been used, before the injection of arsenobenzol.

19. In spite of the fact that nearly all agree that the effect of arsenobenzol is magical, sufficient time has not lapsed to justify the conclusion that a single injection of "606" will prevent what we now recognize as the secondary and tertiary stages of syphilis. Only after long years of careful observation shall we be able to reach a positive conclusion. It will be necessary therefore to keep injected patients under close observation.

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BOOK REVIEWS

Lippincott's New Medical Dictionary. A Vocabulary of the Terms Used in Medicine and the Allied Sciences, with Their Pronunciation, Etymology and Signification, Including Much Collateral Information of a Descriptive and Encyclopædic Character. By Henry W. Cattell, A.M. (Laf.), M.D. (U. of P.). Octavo; 1,108 pages; numerous illustrations. Philadelphia and London: J. B. Lippincott Co., 1910. In flexible leather, with thumb index, $5.00.

Surely the time is ripe for a new medical dictionary. Events are crowding upon each other so fast that a dictionary of three years ago is now out of date.

Doctor Cattell, the militant, who, in medical and educational, as well municipal affairs, is not afraid to fight, does all his work with his characteristic thoroughness. His Dictionary is but a reflex of his daily work.

As the large number of new words coming into use would call for a larger book, this requirement has been rendered unnecessary by an ingenious system of condensation, whereby a large number of terms are defined under a common grouping, according to derivation. This also aids materially in grasping the fine shades of meaning of the various words in the group. Thus you will find more different words given than you would suppose could possibly be contained in a book of this size. All the new eponymic, anatomic, pharmaceutic, bacteriologic, biologic and chemical terms will be found clearly treated. The small amount of biography only suggests that it would better have been left out altogether. For example, why S. Wier Mitchell and D. Hayes Agnew, if not also Gross, Pancoast, Dunglison, McDowell, Sims, and a host of others just as illustrious and worthy?

The author retains the diphthongs æ and œ, as in hæmatinic and diarrhœa, and the h in words commencing with the rough r, as rhachitis, all of which we think is a step back towards the Middle Ages. However, this has all been threshed out long ago, and those who are "sot in their ways" will die sot and the new generation will grow up as progressives.

The book is well made, with thumb index and flexible binding, and it is a marvel to us how it could be produced at the low price of only five dollars. We regard is as the most practical medical dictionary now published.

Doctor, write at once to your Senator and Congressman, urging them to support the new reciprocity arrangement with Canada. It will give cheaper paper for all books, magazines and papers, thus removing a tax upon literature and science, besides saving our own forests.

Medical Diagnosis. By Charles Lyman Greene, M.D., St. Paul, Minn., Prof. of Medicine, Univ. of Minn., etc. 725 pages, profusely illustrated; flexible leather, round corners, gilt edges. $3.50 net. P. Blakiston's Sons & Co.: Philadelphia.

We have so many times recommended this book to our inquiring readers privately that an extended review might seem a work of supererogation; yet it is a duty we owe to all our readers to point them to this work, and we do so now with all the pleasure that usually accompanies the bearing of good tidings.

This is the third edition of the work, which, for a record of two and a half years, attests its popularity. The author treats the reader as a pupil in a class, giving in plain, simple language, accompanied with appropriate illustrations, the most direct route to accurate diagnosis in each diseased condition. Laboratory aids and bacteriologic methods are given due prominence. Marginal titles make ready reference to the paragraphs easy. This is a book the physician should first study through carefully, then keep on his desk for daily reference in his cases.

The Diseases of the Nose, Mouth, Pharynx and Larynx. Alfred Bruck, M.D. (Berlin). Edited and translated by F. W. Forbes Ross, M.D., Edin.; F.R.C.S., Eng. Cloth, 615 pages, 217 illustrations, many of them in colors. Price, $5.00. Rebman Co., 1123 Broadway, New York, N. Y.

Of all the recent works on this specialty, we have selected this one as being best suited to the needs of the general practicing physician. Special attention is given to diagnosis, in which the reader is given much practical help, and also to treatment, in which the simpler and conservative measures are given preference.

Pellagra. By Dr. A. Marie, of Paris, France. Translated by C. H. Lavinder, M.D., of the U. S. Pub. Health and Marine Hospital Service, and J. W. Babcock, M.D., Supt. State Hosp. for Insane, Columbia, S. C. 432 pages, 19 illustrations; cloth; price, $2.50. The State Co., Columbia, S. C.

This interesting disease will have to be very closely studied by American physicians in the immediate future, as it is on the increase in some parts of our country. As the translators wished to present the subject to our profession, they selected the excellent work of Doctor Marie for translation.

The first 146 pages are taken up with a consideration of its etiology, giving a strong presentation of the theory that it is caused by eating spoiled Indian corn. In the judgment of the reviewer, this theory will finally be abandoned, although we admit the circumstantial evidence strongly favors it.

The symptoms and clinical phase of the disease are very well given, with illustrations of not only

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cases in Europe, as studied by the author, but also of South Carolina cases as studied by the translators. The descriptions are very clear and given in great detail.

The various lines of treatment are given, with very little hope as to demonstrable results. This is one of the books of the year that we seriously recommend to our readers.

Bismuth Paste in Chronic Suppuration. By Emil G. Beck, M.D., Surgeon to the North Chicago Hospital, Chicago, Ill. 237 pages; 81 illustrations; cloth, $2.50. Published by C. V. Mosby Company, St. Louis, Mo.

Doctor Beck first gives a full account of the use of the bismuth paste for diagnostic purposes, employing the following formula:

Bismuth subnitrate (arsenic free)....33 per cent.
Vaselin (either yellow or white).....67 per cent.

Boil the vaselin in an enameled jar, and stir in the bismuth while cooling. Let no water get into it. For use, heat in a water bath until liquid enough to be drawn up into the syringe.

He gives illustrations of the various styles of syringes suitable for different localities of the body.

X-rays are then employed, which, by locating the bismuth, diagnose the location, shape and extent of the sinus.

He then takes up the use of bismuth paste for therapeutic purposes, beginning with the following formula:

Bismuth subnitrate .....30 per cent.
Vaselin .....60 per cent.
Paraffin (120 degrees melting point).. 5 per cent.
White wax ..... 5 per cent.

This is employed in sinuses due to spondylitis, osteomyelitis, joint diseases, following abdominal and kidney operations, rectal fistulæ, empyema, pulmonary abscess, cold abscess and other conditions. Limitations, causes of failure and bismuth poisoning form instructive chapters.

The book closes with chapters upon the use of bismuth paste in diseases of the nose, accessory sinuses, ears, mastoid process and in dentistry.

The Hair and Its Diseases. By David Walsh, M.D., Kensington General Hospital, London, Eng. 94 pages, illustrated; cloth $1.00. W. T. Keener, 90 Wabash avenue, Chicago, Ill.

After some introductory remarks on the anatomy and physiology of the hair, the author takes up hygiene, basing it mainly upon bacteriology, and warning against pomades and other "hair growers," as well as admonishing surgical cleanliness of the brush and comb and their individual ownership.

Under Superfluous Hair, he recommends electrolysis as the only satisfactory treatment. Baldness, ringworm, gray hair, eczema, psoriasis, seborrhea and nevus are treated, closing with a chapter on diseases of the nails.

Back-bone. By S. De Witt Clough, Ravenswood Station, Chicago, Ill. Art binding. 50 cents; limp leather, $1.00. Published by the author.

This is a compilation of bright ideas, witty sayings and articles that cheer and help. They are characterized as "Hints for the prevention of jelly-spine curvature and mental squint. A straight-up antidote for the blues and a straight-ahead sure cure for grouch." It is well worth the money for the cheerful optimism it breathes.

Malaria and Its Manifestatoins. By J. H. McCurry, M.D., of Grubbs, Ark. 170 pages; cloth, $1.00. Published by the author.

We are glad to welcome this book as coming from one who has had daily practice in this disease in its native haunts. He is progressive and up to date, ascribing the cause of the dissemination of the poison to the mosquito and giving practical methods of avoiding infection and of stamping out the disease.

He describes a typical malarial paroxysm, simple intermittent fever, remittent fever, pernicious fever, chronic malaria, or cachexia, and hemoglobinuria. It almost makes one feel creepy and shaky to read about them. Under treatment he is liberal-minded, giving treatment from various late medical journals, and also the so-called eclectic method of treatment.

Modern Treatment and Medical Formulary. A condensed and comprehensive manual of practical formulæ and general remedial measures. Compiled by W. B. Campbell, M.D. Cloth. 483 pages. Published by F. A. Davis Co., Phila., Pa.

This book consists of practical points gathered from a wide range of sources by the author. It is just the kind of book which the physician needs for ready consultation upon the subject of treat-

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Poison Ivy Rash.

The following is a treatment repeatedly used by the writer in former years with full satisfaction. The treatment consists in applying two or three times a day flowers of sulphur rubbed up with sufficient water to a thin paste. Of course, it should not be washed sulphur or lac sulphuris.—C. G. Am Ende, M.D., New York City, in *Med. Record.*

Doctor, in sending in your subscriptions tell us what department of *The Council* you like best, what you would as lief see dropped and what new feature you would like to see added

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THE

Medical Council

A MONTHLY JOURNAL FOR THE PHYSICIAN AND SURGEON.

"WE FIND WISDOM AND STRENGTH IN COUNCIL."

J. J. TAYLOR, M.D. EDITOR AND PUBLISHER | PHILADELPHIA, PA. | 4105 WALNUT STREET

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Salvarsan—606—The New Anti-Syphilitic Remedy.

As not only hundreds, but literally thousands, of observers are experimenting with this new agent, there are constant changes of view from day to day, so that any statement made at any given time may be subject to modification before it reaches the press. The best that we can do is to give, as carefully as possible, a comprehensive resumé of the facts developed at this time, as we have tried to do in previous issues, ignoring that which is manifestly too radical.

Requirement.

Syphilis is an infection of the system by the *Spirochæta pallida.* This is one of the protozoal type of organism, such as those causing malaria, sleeping sickness, yaws (frambœsia), relapsing fever, etc. The pathologic peculiarity of organisms of this type is that they rapidly acquire immunity to the antitoxins developed in the body against them, and thus establish a more or less permanent residence in the body, constituting a chronic infection. In this they are distinguished from the *bacteria,* which produce the "self-limited" diseases—those in which the invading germs are overcome and destroyed by the system's antitoxins (if the vitality of the patient is sufficient to survive the struggle) followed by a more or less permanent systemic immunity against that particular infection.

But the protozoa also rapidly develop resistance to small doses of chemical poisons introduced into the system against them for therapeutic purposes. Thus, malaria is *cured* by a large dose of quinine, given at one time, sufficient to destroy at once all the *plasmodium malariæ* in the system; whereas repeated small doses only tend to develop chronic malaria.

Mercury and arsenic are two chemical agents found to be especially destructive of the germ of syphilis. It having been found difficult to introduce enough mercury into the system to destroy the germs without seriously injuring the patient, attention was turned to arsenic. Several times it was thought that success was achieved—as in the case of atoxyl, for example—but extended clinical trial proved that the median line betwen destruction of the germ and non-injury to the patient had not yet been found. By careful, painstaking experiments, Dr. Paul Ehrlich, of Frankfort, Germany, finally announced to the profession that he had found the right combination, dioxydiamidoarsenobenzol, having the formula $C_{12}H_{12}O_2N_2As_2$, to which the name Salvarsan, or 606, has been given.

Salvarsan is a light-yellowish powder, which contains about 34 per cent. arsenic and dissolves in water, forming strongly acid solutions. On account of the acid reaction these solutions are unsuitable for injections, and must be neutralized (con-

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verted into a sodium salt) before use, in accordance with directions. It is supplied in vacuum ampoules, each containing one dose—0.6 gramme (about 9 grains) which must be opened only at the time of use, as it rapidly undergoes chemical change when exposed to the air.

The preparation is administered by intravenous, intramuscular or subcutaneous injection. The intravenous operation requires elaborate apparatus and exact skill in technic and is not likely to become popular in general private practice. That most commonly employed now is injection subcutaneously benath the scapulæ.

The remedy must first be thoroughly dissolved, and then carefully neutralized under painstaking aseptic precautions. The technic is as follows: The powder is thoroughly rubbed in a sterile mortar with about 1.0 (23 minims) of concentrated sodium hydroxide (15 per cent.), until thoroughly dissolved. A drop of 1 per cent. phenothalein in alcohol is then added as an indicator. The preparation is then carefully stirred and a few drops of glacial acetic acid carefully added until the color is changed from red to light yellow. It is then diluted with normal salt solution, transferred to a centrifuge tube, and centrifugated for about five minutes. The supernatant liquid is carefully drained away, and the residue again diluted with 5 to 10 c.c. (1½ to 3 drams) of normal salt, and then placed in a sterile syringe for subcutaneous injection.

Suspensions in oil are now also administered, as being less painful, a special syringe for the purpose having been devised. As the technic is constantly being improved, these lines may be out of date even before you read them.

Syphilitic infants nursed by their mothers who have received this treatment rapidly improve as if it had been given direct. It may be administered direct to infants, in corresponding dosage.

It should not be used: a. In cases complicated with organic disease of the heart or with advanced degenerative changes in the blood vessels. b. In cases of paresis and advanced tabes. c. In cases with advanced degenerative changes in the brain from any cause. d. In cases with acute febrile disturbances from any cause. e. In senile debility.

As in the treatment of protozoal infections generally, the curative effect is secured by the administration of one large dose — Ehrlich's *"Therapia sterilisans magna,"* which may best be repeated within about two to four weeks.

The results thus far shown by this treatment are simply marvelous in the rapidity with which syphilitic lesions disappear. Yet some failures and some qualified successes have occurred.

It must not be forgotten that some observers have for the last seven years secured what seem like similar results from the use of cacodylate of sodium (a salt of the supposed non-poisonous allotropic form of arsenic—cacodylic acid) in intra-muscular injections of one to two grains. It may be that the new preparation will give us some lessons that will enable us to go back to this older salt with improved methods and better prospects of uniform success.

Also, it appears that mercury, instead of being contra-indicated at the same time, acts as a synergist, and it may well be hoped that a combination treatment may be evolved that will give us safe and complete control of this disease. Then we may very soon see the time when the "great pox" will be even more completely eradicated from our civilization than the "small pox" has been.

We have secured for the next issue a practical paper on "Some Important Points in Practical Obstetrics," by Dr. J. O. Arnold, of Philadelphia. The article deals with the checking of lactation, the induction of labor and rotating the posterior occiput.

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Follicular Tonsilitis and Acute Nephritis.

That the tonsil proves to be an avenue for the entrance for infection to the system has been recognized and demonstrated by numerous observers in the past few years.

Recently several men have recognized that acute nephritis occurs as a sequella during or following the attacks of follicular tonsilitis; and that such sequella occurs in a much larger proportion of cases than had been recognized by the profession.

Dr. Hannau W. Loeb (*Journal A. M. A.* for November 12, 1911) records four cases of acute nephritis following attacks of follicular tonsilitis. It was from no suspicion of the existence of such complication; but going into careful details in his examination of these cases, for special reasons, he was surprised by finding the kidney involvement.

Dr. A. W. Bingham (*Archives of Pedriatics,* for December, 1910) gives the report of a case of follicular tonsilitis which was followed by an attack of acute nephritis, coming on in ten days after the beginning of convalescence.

The writer of this was quite recently surprised in a case of this kind as a sequella of follicular tonsilitis that he had under treatment. A specimen of urine, voided by the patient, was brought him, because of a dark and peculiar appearance of the urine. Upon subjecting it to a test 33 1/3 per cent. by volume of albumen was found.

The literature, both in the text-books and the journals, regarding the occurrence of acute nephritis as a sequella to follicular tonsilitis, is very meager.

A routine habit of examining the urine in these cases of follicular tonsilitis or in any inflamed condition of the throat which includes the tonsils will no doubt show the presence of kidney involvement in a large percentage of our cases.

With such consideration and facts presented, it is without doubt our duty, as careful practitioners, to watch the action of the kidneys in every case of follicular tonsilitis in our care, and thus recognize the involvement in its inception, giving us the opportunity to put the patient in the best condition to be cured, as well as taking advantage of the opportunity to prevent an acute case from becoming one of chronic nephritis.

It is also the opportunity, which should be grasped by the attending physician, to advise the patient or those responsible of the possibilities of such sequella, and to request them to report any unusual or suspicious appearance of the urine or action of the kidneys to the attendant at once.

Indican's Syndrome.

We propose for this syndrome, or clinical picture, the name of the *acidemic temperament,* just as we speak of the neurotic, the phlegmatic, the bilious and the thyroidal temperaments. The syndrome, in its full bloom, embraces hyperacidity of the urine as a more or less fixed condition; intestinal toxemia, as shown by indicanuria, and low metabolic activity, as shown by a too small output of urea and urinary solids generally.

This is one of the more recent contributions of the laboratory to clinical medicine. It is also one of the most valuable. The final settling of the significance of indican in urine cannot be too highly appreciated. It is a key to unlock many of the dark subjects connected with intestinal toxemia and autotoxemia.

Conditions which seem to be purely local but, in efforts at treatment, are found painfully intractible, *i. e.,* deeply seated in the system, are now found dependent upon this acidemic temperament.

A few such may be cited here by way of illustration: pyorrhea, gingivitis, adenitis, chronic tonsillitis and other throat diseases, as well as other affections of the cavities of the body. The most conclusive feature of this work is that therapeutic measures calculated to reduce the acidemia and eliminate the toxemia have a decidedly beneficial effect on the disease in question.

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Treatment of Locomotor Ataxia.

Whatever view one may hold relative to the connecting link between syphilis and locomotor ataxia, these facts must be conceded to be patent: (a) Numerous old cases of syphilis, indeed, whole nations of people, show practically no inclination to develop ataxia; (b) in American clinics an increasing number of ataxia victims are just as surely non-syphilitic as any case is ever preceded by syphilis; (c) the futility of anti-syphilitic treatment is not so much as a debatable subject; (d) the all too general opinion that locomotor ataxia is merely another spelling for syphilis is a social outrage on the reputation of many an innocent ataxic and, finally, (e) in view of recent revolutionizing discoveries regarding the cause and nature of syphilis it is up to the syphilographer to codify the subject.

The neurologist has demonstrated that any excitant that places a protracted exhausting strain upon the elements making up the central nervous system will sooner or later inaugurate an incipient locomotor ataxia. This *strain* may be and, we do not presume to doubt, often is luetic in character; but independent of specific disease, wine and venery are classic causes.

However, as above implied, there are well-known causes of ataxia operative in both syphilitic and non-syphilitic subjects. No thoughtful observer can escape being convinced that the old *kill or cure* mercurial treatment of syphilis was capable of doing untold harm, if the patient escaped even worse effects.

As the matter stands, progressive locomotor ataxia is a common disease in aging adults to which medical science owes an over-due and much-neglected obligation, and we hail with delight anything of promising remedial or palliative value. Such was the Frankel Exercise treatment, a scheme for the systematic re-education of involved muscles and muscular groups, and a plan that is sure to yield favorable results in direct proportion to the amount of pains-taking interest the victim is willing to take in the treatment.

It is to be hoped that equally good results may yet be claimed for the treatment reported in a recent issue of *Therapeutic Medicine* by Dr. G. M. Hammond. Reasoning that, if nutrition of the degenerated cells can be maintained for an indefinate period, perhaps we can arrest, or at least materially retard, the disease process. About eight years ago he began treating ataxia with gradually increasing doses of strychnine until doses of ½ grain, three times a day, or even more than this, were reached.

During this time he treated a great many cases, so that he is prepared now to state with some definiteness what this form of treatment has been able to accomplish.

In no instance has he seen a case of locomotor ataxia absolutely cured, but he has seen pains disappear, control over the bladder and bowels regained and locomotion decidedly improved. In most cases the advance of the disease is checked, and a great deal of improvement follows. He has never seen the Argyll-Robertson pupil or the Romberg symptom disappear, nor the knee jerks ever come back; but these symptoms, when present, do not seriously interfere with the patient's life nor materially add to his discomfort. The following is Hammond's method of treatment: Beginning with a dose of 1-30 grain three times a day, at the end of a week he increases this dose to 1-20 grain; and at the end of another week to 1-16. These doses are given in tablet form by the mouth. At this time, he gives in addition to the tablet of 1-16 grain, one drop of a solution containing one grain of strychnine sulphate per ounce of water; next day two drops are given; next day three drops, and soon, each day increasing one drop until doses of thirty drops three times a day are reached.

As thirty drops of this solution equals 1-16 of a grain, he is able to discontinue the drops and to substitute for them another tablet containing 1-16 grain; thus the patient will then take two tablets, each containing 1-16 grain three times a day, or ⅛ grain at a dose. The author maintains this dose for three months, then increases the dose with the solution the same as before until a dose of 3-16 is reached.

He maintains this dose for at least three months, then gradually increases as before. In this way the increase in dosage is made so gradually that few patients appreciate any difference. Seldom is any improvement found in a patient's condition until a dose of ¼ grain three times a day is reached, though the patient's general health improves long before this period.

After a maximum dose of ½ grain is

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reached it has been the author's custom to maintain this dose for about a year and then to gradually reduce it. He now has patients under observation who have not had any strychnine for over two years, and who show no signs at present of relapsing.

Electric Desiccation of Neoplasms, Boils, Carbuncles, Hemorrhoids and Other Pathologic Tissues.

It was our pleasure to hear a paper before the Philadelphia County Medical Society on February 8, 1911, by Dr. W. L. Clark, of 1809 Chestnut street, Philadelphia, detailing this new process for the treatment of lesions of various classification in different parts of the body.

The paper being too long for our space, we give enough for a clear understanding of the apparatus, mode of application, and some of the uses to which it has already been adapted.

The first experiments at desiccation were performed on dead objects, such as a cake of soap, raw meat, etc. We have seen Dr. Clark, in his office, desiccate a hole through a cake of soap, so that the dried soap, in powder form, would drop out, leaving a clean cut hole. Likewise, a hole through a piece of meat, the adjacent portions not being affected. This same effect is produced upon living tissue, resulting in its destruction and ultimate removal. This opens up a large field of improved treatment in surgery, which we believe the profession will be quick to appreciate and to adopt in general practice. Dr. Clark now conducts a hospital clinic, to which members of the profession are freely welcomed.

The apparatus consists of a static machine of large output (from 3 to 6 milliamperes) having 12 revolving plates of special construction for strength and durability, capable of 2,000 revolutions per minute; a pair of field regulators, Leyden jars with special wiring and coils, and a suitable electrode.

It has been successfully applied to the removal of warts, moles, nevi, tatoo marks, pigmentations, and the successful treatment of epithelioma, lipoma, granulating ulcerations, hemorrhoids, acne, X-ray lesions, chancroids, bladder papilloma and lupus. The application is very rapid and almost painless. Malignant growths may be destroyed without opening up blood or lymph channels, thereby preventing metastasis or inoculation of healthy tissue in proximity to the growth.

As applied to living animal tissue, heat effects range in degree from hyperemia to burning. Theoretically somewhere between the two extremes there is a point, the effect of which is more than hyperemia and less than burning, which may be called the desiccation point. The idea is to produce, control and sustain a degree of heat sufficient to cause rapid desiccation of the part to be treated, causing sterilization and converting it into an inert mass.

The term desiccation is used, not in a strict scientific sense, but to express nearest the effect produced, and to differentiate it from coagulation necrosis, as produced by certain bacterial toxins, and the cooking caused by the application of the actual cautery. The actual cautery, brought in contact with the surface of the body, produces superficial searing and does not penetrate to any depth unless the cautery knife is plunged into the tissue. An example of this is steak broiled over very hot coals. The exterior is coagulated and the interior remains raw. A less intense degree of heat has more penetrating power. Steak exposed to a slow fire is cooked throughout.

It is reasonable to assume that, if desiccation could be produced, it would be more desirable in every way than the cautery. It did not seem practicable, until some experiments in balancing electric currents of high potential paved the way, and he is now in a position to demonstrate that what appears to be desiccation of living tissue is not only possible, but is subject to such control that morbid tissue the size of a pin point may be destroyed without infringment upon the normal tissue, as well as a growth of large size. This may, more-

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over, be done with one application, even though of considerable depth. A blood vessel may be desiccated through without spilling a drop of blood.

We quote a few typical cases of the 317 on record up to date. (Those who desire a complete reprint of the paper are advised to address Dr. Clark, enclosing postage, and waiting with patience until the reprints are prepared ready to send out.)

Epithelioma.

History written Sept. 8th, 1910, and case referred by Dr. Samuel F. Walker, 851 N. Broad St., Philadelphia.

"Woman, age 48. In 1904, patient complained of pain at the angle of right scapula. It was refractory to treatment and cause was obscure. In Dec., 1907, a small excoriation of the skin with serious discharge was observed. It gradually grew larger, and at the end of two years was the size of a large egg. It was breaking down and had the clinical aspect of malignancy. There was deep induration and adherence to skin and underlying tissue. Referred to Dr. Clark, May 16th, 1909. I was present at the desiccation operation, and he destroyed it at one sitting. In five days the dry slough came away, having a healthy appearing ulcer underneath, and it progressively healed by granulation. In two months new skin had entirely covered the area with no induration or adherence. Area slightly bleached. No recurrence to date."

[There were several other cases of epithelioma, but we omit them for want of space.—Ed.]

Papilloma of Bladder.

Referred by Dr. Edward Martin, of Phila., and treated in conjunction with Dr. B. A. Thomas, of Phila.

I. G. A., male, age 65. Inoperable papilloma of the bladder, size of a hen's egg, near the trigone. First symptoms appeared eight months ago and bleeding commenced, which was very profuse and appeared at each evacuation of the bladder. He became very weak and anemic. By using a catheterizing cystoscope, Dr. Thomas was able to pass an insulated wire through the instrument, the bladder being inflated with boric acid solution. The wire could be perfectly controlled and brought in contact with any part of the growth desired. First operation, Oct. 1st, 1910. Treatments averaging two weeks apart. Bleeding very much diminished after the first treatment, and entirely ceased after the second. Papilloma rapidly decreased in size and at the present time is no larger than a small marble. Patient has recovered health and strength and is attending to his business.

Hemorrhoids.

Man, age 38. Large protruding internal hemorrhoids, with eversion of rectum over a period of years. Intense spasms of sphincter ani. Obtained satisfactory anesthesia by ionic diffusion of cocaine; used a speculum of rubber with a wide longitudinal groove which gave satisfactory exposure. On Feb. 25th, 1910, desiccated hemorrhoids as per former technique. Slough came away in two days, ulcerations healed rapidly, rectum returned to place and spasm disappeared. No recurrence and patient well.

Two small pigmentary naevi, occurring on the face of a physician, were treated with such perfect effect that it is difficult to notice where they were.

Ophthalmia Neonatorum of Late Onset.

Many physicians have been nonplussed at times to observe ophthalmia neonatorum occur two or three weeks after labor, and they have supposed that these late cases were not of gonorrheal origin. Herein a mistake is frequently made.

As we all know, specific gonorrheal ophthalmia usually manifests itself quite early, but eye specialists can tell us that most of these late eye discharges following labor are also of gonorrheal origin. Cases are sometimes observed wherein the usual applications of silver nitrate seem to be of no permanent benefit, and one is led to doubt their specific origin.

The explanation of both of these phenomena is that while the eye may escape infection during the passage through an infected birth canal *the nasal cavities* may be infected instead and a nasal catarrh of gonorrheal origin may slowly spread to the frontal sinus, the antrum, and even to the eyes.

In these late cases the eye may not become involved until three weeks after labor. Naturally, the precautionary application of silver nitrate to the eyes at birth may not prevent the later gonorrheal infection, provided the nasal passages were also infected at birth. When the eye is infected in this secondary way applications of silver solution *to the eye alone* cannot effect a cure.

When a purulent catarrh follows birth we cannot afford to take chances, else we run grave risk of the eyes developing gonorrheal ophthalmia. These cases of catarrh must be adequately treated in every case where there is the least doubt—and the doubt may well exist despite anything said by the parents respecting their sexual history.

We have secured for a future issue an article giving a very successful method of treating urethritis by Dr. L. B. Russell, of Hoopeston, Ill.

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Placenta Previa.

There appears to be a great deal of dissatisfaction with the treatment of this alarming condition and a marked departure from the old teaching of *accouchement forcé* in the practical handling of the cases. It appears that tears of the cervix are frequent in rapid or forced delivery and dangerous hemorrhages are as apt to be due to torn blood-vessels as to placental bleeding. The traumatism also opens the way to more or less serious infection.

De Lee, in The Practical Medicine Series of 1910, and Dührssen in the December, 1909, *Klin. Wochenschr.*, Berlin, strenuously oppose the methods of rapid delivery other than by the sometimes necessary Cæsarian section. They argue that too many children die by the rapid method and that lacerations occur of so serious a character as to require immediate suture (a matter requiring a good surgeon and skilled assistant to get good results) and that later endometritis and displacements are apt to follow a forced delivery.

We have had some rather alarming experiences ourselves and quite agree with the recent teaching that many more mothers and babes would be saved were we prepared always to give cases of placenta previa the advantages of a good hospital at the time of confinement. But this cannot always be. Permit us to advise that conservative methods be first employed, as the colpeurynter, the tampon, version or puncture of the membranes—with Cæsarian section as a safe reliance in favorable cases. Many women die from what at first appear as slight cervical tears, but which suturing and tampons do not control. These tears, from forcible delivery, are among the most difficult cases to properly approximate, and the hemorrhage therefrom has given many a doctor the heartache as he saw the life of his patient ebbing away.

Cure for Pyorrhea Alveolaris.

Joseph Head, M.D., a practitioner of dentistry, Locust and Fifteenth streets, Philadelphia, has developed a successful treatment of pyorrhea alveolaris. As this subject is of great interest to all physicians the Doctor has promised to give our readers a full account of it in an early issue of THE COUNCIL.

Iodine As An Antiseptic.

We have been using with great satisfaction a 2 per cent. alcoholic solution of iodine crystals as a preparatory wash to sterilize the field over quite an area surrounding lesions we wish to keep in dressings for a time or upon which we operate. There is no better antiseptic than iodine, and this solution can be kept ready for use at a moment's notice, and it does not deteriorate from standing.

Merck's Report makes the suggestion that iodine may be used in the form of a glycerite, and the suggestion is a good one. To twenty parts each of iodine and of potassium idodide add eighty parts of glycerine, and carefully incorporate. This may be kept in stock and, when an antiseptic iodine ointment is desired, twenty parts are added to eighty parts of a sterile ointmnt base. Petrolatum or benzoinated lard serve very well for the purpose, but these ointments deteriorate in time.

On account of the staining qualities of iodine many physicians hesitate to use it very much, but we are sure their objections will vanish when actual use reveals what a satisfactory and dependable dressing it is in proper cases.

Pellagra.

We invite the attention of the reader to the interesting paper on this subject in this issue by Dr. Samuel Stern, of Philadelphia.

In his paper Dr. Stern refers to Dr. J. W. Babcock, of Columbia, S. C. (one of the translators of Marie's work, reviewed in our February issue), as "The Dean of Pellagra in America." We are pleased to announce that Dr. Babcock will write a series of articles on this most interesting and important subject for this journal, beginning with the April issue.

As the correct pronunciation of medical terms is very important, we note that four dictionaries consulted give four different pronunciations: but it is our opinion that the pronunciation best supported and the one which will finally prevail is—Pel-lagra, the accent on the middle syllable, the "a" in which has the short sound, as in "at,"

Mercury succinide, or succinamide, has proven a complete failure in tuberculosis in the hands of those who have thoroughly tried it.

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Original Articles

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Sentences, like sunbeams, burn deepest when most condensed.

Vaccine Therapy in Puerperal Infections.

By G. H. Sherman, M.D.,
Detroit, Mich.

Fever a few days after a confinement should always be regarded with apprehension, because it may be the first indication of a dangerous infective process developing. While it is true that we often have a rise of temperature in these cases, which subsides spontaneously in a few days, yet it is just this hope that nothing serious will happen which is often responsible for the neglect of efficient treatment until it is too late to get beneficial results.

From an anatomical standpoint one could hardly imagine a more favorable condition for the development of a serious infection than the womb presents after a confinement. Being a large organ, with an extensive excoriated area from the previous placental attachment, much tissue and surface is available for germ development, and the organ undergoing subinvolution resulting in a lowered vitality also favors the infective process. The womb having contracted to but a fraction of its former size, presenting an irregular inner surface with many folds, in which the infecting organisms may develop, and being located in the abdominal cavity, the infection may readily extend to the peritoneum, resulting in a general peritonitis.

In some cases the infective process develops much more rapidly than in others, depending on the relative resistance of the patient and the virulence of the invading organism. In these cases the infection is always local before it becomes general, it being impossible to say just when general infection takes place.

Local treatment, with the object of destroying the infection, at best is difficult to carry out, because the entire surface of the uterine cavity cannot be reached. Curetting, unless very carefully done, may do more harm than good by exposing new surfaces for infection and by unavoidably manipulating an inflamed organ. If the infection has extended into the uterine tissue it cannot be reached by any local treatment. On this question Professor Carstens says (*Journal A. M. A.*, August 6, 1910, page 476):

"The point I want to make is simply this: that by local treatment more harm is often done than good. Douches given by ignorant persons often implant new and virulent micro-organisms within the genital tract, while scraping and curetting and injuring the delicate mucous membrane opens new channels for absorption.

"When a localized abscess is formed which can be opened into the cul-de-sac of Douglas or somewhere else, I certainly believe it should be promptly opened; but as we see the disease generally several days after its onset, I think no local treatment will be of any avail.

"I have been all the more desirous of bringing this view before our section since reading the proceedings of the last German Association of Obstetricians, where Winter, in an exhaustive article, shows this most clearly, coming to the conclusion that simple absorption ceases as soon as the necrotic tissue is cast off; that simple local infection and endometritis stops soon without any treatment; that no local treatment will prevent deep or general infection, and that when absorption takes place and there are remnants of tissue still in the uterus, one should be tardy about removing them, as these are generally quickly cast off and the patient gets along just as well as with the most vigorous treatment."

From these considerations it is evident that, unless the systemic resistance is sufficient to prevent the infection spreading, our case is hopeless. Naturally under such conditions our treatment should be directed toward rendering the individual immune to the infecting organism. For this purpose bacterial vaccines are the most efficient remedies at our command. Naturally the best results are obtained when the vaccine is used early in the course of the disease—before general infection takes place.

As might be expected, there are a variety of germs responsible for infections during the puerperal state, but the most dangerous (with the rare exception of the diphtheria or tetanus bacillus) that should be particularly guarded against is the

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streptococcus. Streptococcus infections in these cases often progress very rapidly. For this reason the vaccine treatment should not be delayed.

As soon as a uterine infection is suspected, as indicated by a rise in temperature, rapid pulse and the character of the discharge, a dose of streptococcus vaccine should be given. It is not advisable to wait for a bacterial examination of the uterine contents before giving the vaccine, because that means delay—and delay here is often just as dangerous as to postpone treating diphtheria with antitoxin while waiting for the report of a bacterial examination of a throat culture. Nor should treatment be postponed until an autogenous vaccine can be made, because, meantime, the infection would be liable to progress where it could not be brought under control. A good stock vaccine will serve the purpose much better.

Where facilities are at hand bacterial examinations of the uterine discharge should be made to verify the diagnosis. This is conveniently done by inserting a speculum, cleansing the os with sterile cotton, and then passing a small sterile swab into the uterine cavity, being careful not to touch the speculum or anything else with the swab while removing it. With this swab smears may be made and culture tubes inoculated for further examinations.

Staphylococcus infections after a confinement are also common, but they are not so serious, this organism having a tendency to confine its operations more particularly near the point of infection. In many cases we have mixed streptococcus and staphylococcus infections and for this reason it is advisable to give the patient a mixed vaccine containing an average dose of both organisms, 30,000,000 streptococci and 100,000,000 each of staphylococcus albus and staphylococcus aureus. The results with this treatment, when used early, are almost invariably most gratifying. The temperature and pulse usually drop to normal within twenty-four to thirty-six hours. If no material improvement should be observed in twenty-four hours the dose should be repeated. Where the temperature has been down and rises again a few days after the last inoculation, with other symptoms indicating that the patient is not doing so well, the dose should then be repeated.

The vaccine treatment is not contra-indicated in advanced cases of puerperal infection. Physiological doses of bacterial vaccines are non-toxic and harmless. Where the patient is suffering from extreme toxemia not much should be expected, but even in these cases the prompt administration of vaccine will sometime turn the tide and save the patient. These vaccines are given with an ordinary syringe, aseptic precautions being observed.

In puerperal infections the colon bacillus is also often found. Where the colon bacillus is present there is a foul odor to the discharge. In such cases colon bacillus and streptococcus combination vaccine should be used; colon bacillus 40,000,000, streptococcus 30,000,000 Inoculations should be repeated the same as indicated above where streptococcus and staphylococcus combination vaccine is used.

Colon bacillus infections are the principal factor in preventing union in many cases of lacerated perineum after a confinement, no matter how carefully the parts have been brought together by appropriate stitching. In these cases colon bacillus vaccine is of inestimable value, used as *a prophylactic* just after the confinement. The following case is a good illustration:

Mrs. A. K. Had been confined once before, at which time the perineum was lacerated into the rectum and neglected, so there was no union. Delivery in the last confinement was normal, but the small remnant of perineum was lacerated into the rectum, extending nearly two inches upward. The torn surface being small, I dissected away enough mucous membrane to make a proper perineum after stitching the parts together. The tear above the perineum was stitched with twenty-day catgut and the perineum was united with silkworm gut. For some reason the stitches made with the catgut gave way during the second day, leaving a recto-vaginal fistula, through which the fecal matter passed freely into the vagina. A more unfavorable condition for healing a lacerated perineum could hardly be imagined. I gave the patient colon bacillus and streptococcus combination vaccine from the start, making four inoculations at three-day intervals. There was no local treatment employed. There being almost a continual discharge cleanliness was hard to carry out. Very little inflammation followed, resulting in a good union of the wound and sphincter muscle. The stitches were removed on the thirteenth day, when there still existed a recto-vaginal fistula. Two weeks later, however, to my surprise

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and gratification, the fistula had closed. This is an extreme case, but it aptly shows what these vaccines will do to prevent bacterial invasion by raising the systemic immunizing power.

From a somewhat extensive experience as a result of consultation and inquiries from physicians, and from my own cases extending over a period of four years, I am confident that we have no other means at our command that will so effectively avert dangers and unpleasant consequences in puerperal infections as the timely use of bacterial vaccines. They can be advantageously used as prophylactors as well as curative agents, and every physician should have them on hand for immediate administration. They are not expensive and will retain their potency for a long time. Streptococcus, staphylococcus and colon bacillus infections are so common that occasions for advantageously using these preparations are almost daily met with by the general practitioner.

419 St. Aubin Avenue.

[Dr. Sherman has kindly consented to follow this with an article in our next issue on "Bacterial Vaccines in Infected Wounds."]

A Course on Diseases of the Rectum.

This special branch of medicine has been developed with wonderful rapidity within the past fifteen years, due to the concerted efforts of those who have organized themselves for the purpose of a more thorough study of it.

One of the leaders in this movement has been Dr. Lewis H. Adler, Jr., of Philadelphia. Much of the success of the work has been due to his enthusiasm and his high sense of professional duty to this class of patients.

Realizing the desire of the profession at large to have a comprehensive knowledge of this subject as it has been developed to the present date, we have secured Dr. Adler's kind consent to present to our readers a series of articles during the next few months treating the subject from the standpoint of the wants of the general practicing physician. Each article will be complete in itself, treating of some distinct subject in this special line of work.

It is important that any subscriber who changes his location should at once notify us of his change, giving his old address also, so as not to miss any numbers of THE COUNCIL.

The Troubles Which Arose from a Nerve Pinched by a Cicatrix.

By Heneage Gibbes, M.D., C.M., F. R. C. P. (London).
McAlester, Okla.

The following case is interesting, as it shows how small causes will produce large effects, and it further illustrates how difficult it is for some men to see a small cause lying at their feet; their ideas are large and they think they should find some large and important cause corresponding to the effect that has been produced.

I was sent for to a case with the following history: The man was a painter, and some years before he had suffered from pains in the head, which gradually got worse, until he became so bad that he was sent to an asylum as a dangerous lunatic. He remained in the asylum for two years, when he was discharged as cured. He went back to his trade, and for some time showed no signs of any trouble, but it came back by slow degrees until the condition became serious. He had complained of severe pain in his right leg, and this would become so intense that he rolled on the floor in agony and would have committed suicide but that he was closely watched. I was told that his attending physician had been discharged, as he had not been near the case for several days and his treatment had seemed to the patient to aggravate the disease. The doctor had put on a long splint from hip to ankle, and the patient told me he had broken it into small pieces within five minutes of the doctor's leaving him.

I stripped him and made a thorough examination. I found a well nourished condition; heart and lungs were all right; there were some painful spots—one over the left eye seemed to be the worst, as it persisted and caused him pain on heavy pressure—the others shifted and no pain was produced by pressure. I found a condition of the left arm which I thought would give a key to the trouble. The elbow joint was anchylosed and there was no mobility whatever. On the outer aspect there were three cicatrices in a line and their real appearance showed that they had not existed long enough to give the newly-formed connective (scar) tissue time to contract and obliterate the newly-formed blood-vessels. He informed me that this elbow had been operated on some years before and that an

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open sore had remained for some time and had only healed some months before.

He was suffering intensely, and to relieve him I gave a hypodermic injection of ⅛ gr. morphia and 1/200 gr. of atropine sulphate, which relieved him, and he promptly went to sleep.

I could find no specific history and no history of any kind that would account for his condition. I left orders for him to have plenty of nourishing food and to be kept perfectly quiet in bed, and to call me if the pain came back. I was called at 2 A. M. and found him suffering severely in the same way as before. A hypodermic of the same strength promptly relieved him. I left him asleep.

I had now made up my mind that lead poisoning had something to do with the trouble. I put him on treatment for this and there was an improvement in his general health, but the pain came back in his leg, and after some weeks I had to increase the dose to ¼ of a grain of morphia and 1/150 of atropine, which dose I never exceeded and seldom gave more than once in the twenty-four hours.

I had treated him now for a number of weeks until I had got the lead out of his system and the pain in his leg and over the eye had not improved very much. I had forgotten to say that before I got this case he was seen by a specialist in ophthalmology, who said he did not know what caused the pain, but that he should be sent to the asylum again as, if left as he was, he would kill himself or somebody else. I had this to contend with, as his wife and near relative were constantly in fear of his doing something dreadful; but after a time he was quieter and a hypodermic injection would soothe him almost immediately.

At this time, when he was slowly improving in every way, one rainy day, he thought it would be a good idea to trim some young maple trees in front of his house. Most people know the slipperiness of young maple bark when saturated with water, and what might have been expected happened in his case—he fell out of the tree and alighted on his head and shoulder on the cement sidewalk.

I had some difficulty in making out just how severely he was hurt, but I satisfied myself that his spinal cord had received a terrible jar, and in the condition of his nervous system I did not like it at all. I made the most of the blow on his shoulder to keep him quiet in bed and use counter-irritation along the spinal cord.

Just at this time a friend of his, while riding a bicycle, had an accident which gave a bad jar to his spinal cord. He was treated for his bruised condition, but no special attention was paid to his spinal cord. He was a heavy man and the jar he had received was a very severe one. He was allowed to get up and be about, and was treated for rheumatic pains in his back. I have had several of these cases of jar to the spinal cord—railway spine—and I am always afraid of what may happen if the patient cannot be kept perfectly quiet, and I told my patient that I thought his friend would die. I was so glad his shoulder was badly hurt, as I was able to keep him in bed and counter-irritate along his back. He could not see the necessity of this, and I had lots of trouble with him.

In the meantime his friend was sent out West with a hunting party to get rid of his rheumatic pains. He got there, but promptly returned, went to bed and died. My patient was much impressed with this, and I had no difficulty in keeping him quiet for some time.

He felt so well one day that he went to the barn and commenced cleaning it up. I had just returned to my house when a man came running in, saying my patient was dying.

When I got to his house he had his wife and children and some near relatives about him and was going to die in orthodox style. I gave him a capsule of nitrite of amyl (which I am never without), and he promptly changed his mind about dying. It was a typical case of pseudo-angina pectoris, brought on by the exertion and stooping in cleaning out the barn. It taught him a lesson.

I had all this time been evolving from my inner consciousness what was the cause of all this trouble. It was promptly relieved by the treatment, but regularly came back, and I told him that I was convinced that a nerve was involved in the cicatrix at the elbow and that the pressure of the contracting fibrous tissue was causing all the trouble, the remedy being an operation to free the nerve from the tissue which was binding it to the bone. He would not believe this for a long time, but at last went to a professor of surgery, who refused to operate, as he was afraid of cutting the nerve. A second surgeon was applied to, but refused, as he said there was not suf-

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ficient vitality in the parts; he was afraid they would not heal. Then, without telling me, he went to a surgeon of another school, who said certainly he would operate and make a new joint if he wished. This he did not agree to, but was in the hospital only three days and came to me with a beautiful linear scar in place of the three cicatrices and the pain in his leg and head gone. I told him he would probably have some return of the pain occasionally, as the nervous impulses had been running so long in wrong channels that they might get back with them again sometimes, and this they did, but gradually ceased until he was entirely free from all trouble.

At this time I lost sight of him for two years or more. I had told him that he might have trouble from the bone if the original mischief was again set up, as his was what he used to call a strenuous condition, and my experience has been that you can never be sure that such a condition will not recur, even after a long interval. He came to see me several times and reported that all was well.

One night, however, I was called by telephone that he was at his brother's house and in such pain that they could do nothing with him. I found him suffering acutely and he informed me that the pain had come back and all that his physician could do for him only made it worse, and he had made up his mind to have the arm amputated above the elbow. He was now living in a city some fifty miles from me. At the last moment he thought he had better come and see me before having the operation.

He was in a terribly nervous state, and I thought at first that he had been drinking, but he had not and was always a very temperate man. I gave him one of full strength H. M. C. tablets hypodermically and he shortly went to sleep. I left two of H. M. C. modified, one to be given when he woke. I also gave him my usual alterative pills of blue mass, ipecac and rhubarb, with a saline in the morning and directions to call me if he woke at any time and felt bad.

I did not see or hear anything of him for five days, when he walked into my office and told me he was on his way home. I asked him about the pain and when the arm was coming off. He said when he woke after the dose I had given him the pain was entirely gone and he had no trace of it since. I gave him medicine to last him a month and told him to come and see me when it was finished. This he did regularly for some time, with no return of the pain, and now I have not seen or heard of him for over twelve months.

This, I think, is a very interesting case, especially in hearing this man relate the conditions in the asylum as they appealed to him. He was well treated, but no attempt apparently was made to find out what was the reason of his being put there. The diagnosis was taken for granted that he was insane, and he said that the surroundings, the association with actual lunatics, and the lack of any rational conversation from anyone was so depressing that he felt he would surely become insane if sent there again. He was, unfortunately for himself, a man with no imagination, no sense of humor, or he might have derived some amusement from his surroundings; but no; he was insane and he was treated as such, and there was no appeal. Some men would commit murder, some suicide, under these conditions.

Loss of Compensation in Disease of Female Pelvic Organs.

By Frederick A. Rhodes, M.D.,
Pittsburg, Pa.

All true physicians desire to prevent disease; all true lawyers desire that dissensions shall cease, and all true ministers desire the day when sin shall not be known. Let us not say that they all expect these Utopian days, because they know that their realization is impossible here.

The medical man would provide an elixir of life or a panacea for all disease to which humanity is afflicted, were it possible. He is continually using prophylaxis: prevention of disease.

In spite of our endeavors to protect we still suffer from disease, but in certain specific forms much has been done to lessen the prevalence, as in cholera, malaria, yellow fever, tuberculosis, etc.

When a certain disease makes itself manifest, which time may be a first attack, the termination may be death, complete recovery in a reasonable time, or recovery for a time, to be followed by a second, third, or more attacks.

In the period between the cessation of symptoms and other attacks nature has done much to protect the organism. In chronic conditions, where the onset has

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been insidious, time probably unknown, attacks, as in rheumatism, gout, neuralgias, etc., are frequently seen to be followed by a period of comparative freedom from these diseases. In some persons we find a condition of well to-day and sick to-morrow. The cause of this temporary cessation of symptoms is the fact that nature is compensating for existing pathological conditions in her own sweet way, trying to prevent further trouble; inflammatory exudates are thrown out, an infective area is walled off, pus is more or less absorbed, various organs show more activity than in health, the heart beats faster, we breathe more frequently, the kidneys have more work to perform, the liver has to look after the increased amount of katabolic substances, etc., the organism is compelled by natural laws to take charge of the invading bacteria, if the disease is an infecfection, and provide means of combating the toxemia which is produced.

If the disease is not infectious in nature, but is produced by physical and chemical action on the heart, alimentary canal, genito-urinary tract, sexual organs, etc., the entire organism, to a certain extent, is responsible for the recovery as far as possible.

In the removal of one organ, as a kidney, nature compensates by the other enlarging. In removal of part or all of the stomach compensation occurs by that work being done by the intestines. Pathological conditions of the lungs, kidneys, blood-vessels, etc., are followed by hypertrophy of the heart; if it can compensate for vascular loss in these organs there will probably be no symptoms.

Nature, then, compensates for disease conditions by hypertrophy and over-activity, endeavoring to restore a healthy condition. When, for any reason, the compensation is lost, there is a return of symptoms—another attack—or there may be superimposed upon the old quiescent pathological tissues other changes which may produce conditions different from the former attack. What we need is a greater study of general pathology, more attention to pathological physiology; more observations as to the "why" of certain symptoms and less to the action of new remedies. If we study prophylaxis with the same earnestness as we do treatment we will be performing our work as physicians in a much better way. It is quite well to be able to disagnose an attack of salpingitis and care for the patient until she is finally "well again," her tubes and probably ovaries having been removed. There is no question which concerns the physician so much to-day as the teaching of prophylaxis in the subject of venereal disease. The physician who does not insist that the young man with an uncured case of gonorrhea shall not have intercourse, who does not prevent the syphilitic from getting married until he is free from the disease, has no right to the diploma which hangs upon his wall. Let us not forget the thousands of women who are compelled to be robbed of their organs of generation on account of having married an uncured gonorrheic, and of the many thousands of young children brought into the world deformed, idiots, and of the vast multitude which die during the period of development, because a so-called father was not cured of syphilis. (As a word of caution while we are admiring the wonderful results which appear to follow the use of salvarsan, we have no right to declare that the individual is free from syphilis, even with a negative Wasserman, until a reasonable time has elapsed in which he is free from all symptoms.)

In order that we may understand how compensation occurs in disease of the pelvic organs we must first take into account the normal functions of these organs in the female, and how they are related to other organs and structures. The female pelvic organs are divided into those sexual: the ovaries, tubes, uterus, etc.; and those excretory: rectum and bladder, with part of the ureter.

The sexual organs communicate with the outside through the vagina, and with the abdominal cavity through the fimbricated ends of the tubes. These organs are contiguous to the intestines, the omentum and pelvic excretory organs; hence, it is quite easy to understand how a disease of these structures or altered relations will affect the sexual organs.

The pelvic organs are related to all parts of the body, communication between the various structures being by means of the blood, lymphatics and the nerves. The sexual organs are for intercourse and reproduction. The internal secretions produced by the ovaries are of great importance. We do not yet understand how menstruation is produced. Novak has recently emphasized three factors which must be considered in the physiology of

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menstruation: (1) An underlying cause as yet undetermined, to which is due the occurrence and periodicity of menstruation; (2) the vasamotor phenomena, which affect the pelvic blood-vessels; (3) the histological modifications of the endometrium, which correspond to the various phases of the menstrual cycle. The effect of the ovary on the occurrence of menstruation is quite likely due to a chemical substance, a hormone, in the internal secretion of this organ, which acts on the blood-vessels or the endometrium directly, being carried there through the blood stream. The nervous connection between the uterus and the ovaries is probably of much less importance than has been believed.

Physiologists have shown that a very important relation exists between the thymus, thyroid and pitutiary glands and the sexual organs. I have several times noted the marked association of amenorrhea and adiposity, both of which in these cases are probably due to a hypothyroidism; some relief of both conditions has been obtained by the use of thyroid gland.

It is surprising how little ovarian tissue may be necessary for the production of a very profuse menstruation; in fact, the quantity may be abnormally large, this pathological condition being due to one of two causes: either the ovary in some way maintains, besides the production of menstruation, an inhibitory action, preventing too great a flow, which is made manifest through the circulation also; or the operation for the removal of the ovaries has produced local circulatory changes responsible for the excessive menstruation. We know that occasionally, when all ovarian tissue was thought to have been removed, menstruation has occurred regularly, and was more profuse than before. This is hard to account for when we remember the explanation of the function of corpora lutea, which is described below.

What has frequently been described by the pathologist as glandular endometritis is often shown to be normal physiological hyperemia of the endometrium which precedes menstruation. The monthly cycle of the endometrium shows four stages during the menstrual life of the woman; in all of these the appearance is different.

There is no operation which has been so much abused and used with so little reason as curettage, the operator forgetting, if he ever knew, that the endometrium has a physiological function. There is only one procedure which vies with this one of curettage in being abused, and that is washing out the stomach. I believe many men would use either if there was a little leucorrhea or pain in the abdomen, regardless of any other pathological condition present in the patient, be it corns or wax in the ear. It is not necessary to describe all the conditions affecting the pelvic organs.

An attempt will only be made to describe briefly why certain diseases recur with a period of comparative relief between attacks. When we pause to consider the large number of institutions now in existence which claim to cure the sick by the use of natural methods, *e. g.*, rest cure, electricity, baths, water cure, sunshine, walks in the early morning dew, diet of whole-wheat bread, pressed raw food, nuts—in fact, any diet which is novel and inexpensive to the institution—cures by faith and prayer, and a multitude of others which do not now occur to my mind. Then when we further learn that many good people, persons of sound reasoning, credited as being of a high grade of intelligence, except by certain physicians, proclaim that they have been highly benefited and cured by some of these various methods above mentioned, it is time for us to pause and consider what is the trouble with our treatment in so many cases.

In the first place the physician who prescribes for pelvic trouble or inserts a tampon without knowing the existing trouble is no better than the proprietor of a "nature-cure" sanitarium. Nor is the man who prescribes a proprietary medicine for dysmenorrhea any more scientific than the druggist or the old woman who says, take Dr. Jones' Pain Killer.

I mentioned above that the use of the curette was greatly abused. This can be better understood when we study the recent experiments of Loeb. He has shown that in guinea pigs and rabbits, from two to nine days after rupture of the Graafian follicles, the uterine mucous membrane reacts to stimuli in a peculiar way. If incisions are made into the uterus or foreign bodies are inserted into the lumen, enormous proliferation of the stroma cells will be produced. This proliferation causes the development of tumor-like formations which persist for ten days and then disappear by necrosis.

The corpus luteum prolongs the sexual cycle, and also regulates the sexual cycle

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by inhibitory ovulation. When the corpus luteum persists other follicles are prevented from rupturing. When the corpus luteum degenerates other ripe follicles rupture. In pregnancy the corpus luteum persists and ovulation ceases. Should later experiments prove, without doubt, that these things are true, what say you to many of the methods of treatment we have been using for disturbances of menstruation, etc.?

What can we do that is of positive benefit to the patient? First, make sure of your diagnosis; second, if the condition is of such a nature that immediate operation is demanded, perform same; third, if the condition is an inflammation, prevent the spread as far as possible; operating in inflammatory cases, except appendicitis and a few conditions where the life of the patient may be saved, only to permit the escape of pus which may have formed; fourth, in conditions which may produce more serious consequences if allowed to continue, get the patient in as good a condition as possible, and then operate; fifth, in cases which appear to be limited, treat symptomatically and watch for results. We hope, in any of the conditions mentioned, whether severe enough for an operation or not, that in each case nature will be called in to compensate for many of the pathological conditions presented, and further, that when the patient is in apparently good health, the disease might not recur or have disturbing sequelæ. The nature-cure specialist does this; he allows nature to compensate without interfering with the processes as far as possible. How, do you say? The patient is put at rest. The diet is of the simplest. Intercourse is forbidden. Congestions of all kinds are limited in pelvic organs. We prescribe tampons, see that the patient takes purges frequently, but, in the meantime, how many of our patients are put in bed, how many women are told that intercourse is forbidden for so many weeks or months; how many are given a particular diet; how many are given exercise which might relieve local conditions, how many are relieved in their amount of daily work; how many are soothed and calmed, as in these institutions referred to?

It is hard to acknowledge, but the truth must out; nature cannot compensate for a case of a endometritis or a pus tube, or an inflamed ovary if the suffering woman is compelled to endure intercourse twice daily and perform her arduous daily duties.

What we must do is to consider what is the natural sequelæ of certain diseases and what will be the recurrence if nature is not allowed to do her part. No surgeon can handle a large amount of inflammatory material which is so frequently seen in pelvic inflammation, as well as nature can, if she is permitted and assisted in the proper way. We have probably all seen the entire pelvis full of pus, which we evacuate, all the organs are a mass of adhesions; next year all is freely movable. This is not always the result; if in a few months absorption does not occur and adhesions are harmful, get busy, remove and relieve.

We are now told that a temperature of 104° for a few hours will kill gonococci in a pus tube; may it be true. Pus tubes seldom rupture; for this we should be thankful. Tampons and douches are of little value to tumors or pus tubes which must be removed. Treatment may relieve a co-existing endocervicitis. Prolapses of the ovaries and uterus are rarely cured by treatment, but can be much relieved by massage, tampons, rest, and other appropriate treatment.

Gynecologists find that most of the patients who present themselves for treatment complain of one or more of the following symptoms: Hemorrhage or altered menstruation; pain; discharges from uterus, and of referred symptoms.

While these symptoms are few, their causes are many. Briefly, we may say that the causes of hemorrhage may be either local or circulatory. Of the local causes we find inflammation of the endometrium, malignancy, polyps, fibroids, erosions, retained foreign substances, extra-uterine pregnancy, etc. Of the circulatory causes we note heart disease, passive congestion due to disease of the uterus, ovaries, tubes, tumors, malpositions, disease of the uterine arteries, and constitutional disturbances which are made manifest through the circulation. Would we curette the nose, rectum and stomach for all cases of hemorrhage from these organs? I trust that the question is impressive enough to deserve careful consideration in those cases of uterine hemorrhage in which there is doubt whether or not the patient would be benefited by curettage.

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Pain may be due to local or constitutional disturbances, the local being inflammation, pressure of tumors and organs, adhesions, etc. The constitutional causes of pain are, to a large extent, refered from some other part of the body, and then diseases of pelvic organs may refer the pain to head, back, limbs, etc.

Discharge from the uterus of a mucous or muco-purulent character may be due to disease of uterus, tubes or occasionally the ovaries. It may be due to disturbances in circulation and to constitutional conditions. It is normal for some women to have quite a little discharge from the uterus preceding menstruation.

Having mentioned a few of the symptoms and probable cause of same, it is not necessary to go into detail as to how each of these may be produced, and how each could be relieved. The intelligent physician knows that if a pelvic symptom is due to a constitutional disturbance this is not a case for operation. I have actually had some cases of pelvic trouble get well without operation; this may seem strange in the present day of brilliant surgery.

I believe in operative interference—in fact, it is essential to my welfare—but I believe that we can learn much from nature which will be of value to the patient, both physically and financially. The general practitioner should not treat unknown conditions because he may lose a few fees. The surgeon should not bid for work causing many a case to be operated on unnecessarily, nor should he refuse to operate upon deserving cases who may not have a fee.

I trust that these few remarks may be sufficient to cause us all to stop and think when we are examining the patient; that they will cause us to be more careful in examining for the cause; that they will prevent us from taking the place of nature or of preventing her from doing her work; and, finally, that they will augment our efforts in preventing disease.

800 Keenan Building.

Motto: Don't ride backwards; you never see a thing until you've passed it.
Face in the direction of progress.

We advise every reader to send to the Government Printing Office, Washington. D. C., and ask (free) for the vest-pocket booklet. "Physician's Pocket Reference to the International List of Causes of Death."

Pellagra: Its Prevalence and Clinical Phases.

(Editor's Abstract of a Paper by Samuel Stern, M.D.)

[An excellent paper of timely importance was presented to the Philadelphia County Medical Society on February 8th by Dr. Samuel Stern, 402 South Broad street, Philadelphia. Omitting some technical details and controverted points, we present below the main practical portions of the paper. This subject should be of interest to every family physician in the United States.]

That pellagra could exist outside of certain prescribed areas has been vigorously contested by many authors in the Northern and Eastern States in the past, and, despite accumulative evidence of small epidemics in widely scattered areas, the profession still remains tardy in its recognition of the presence, the importance, and the dangers of a disease that has proved a veritable scourge in some parts of Europe; so that my purpose is not only to again record more fully my observations of pellagra in our midst, but also to endeavor to awaken the interest of the medical profession in the study of a disease that has already assumed not local nor State but national importance.

Under date of July 24, 1908, the following communication passed between Surgeon-General Wyman, of the U. S. P. H. & M. H. S., and the Secretary of the Treasury:

"Sir—I have the honor to transmit herewith a brief manuscript upon pellagra (referring to Passed Assistant Surgeon C. H. Lavinder's 'praecis' upon pellagra.) This interesting and highly fatal disease has but recently been discovered in the Southern States. It is a veritable scourge in certain portions of Europe, and it may become endemic in this country, as it is associated with the eating of diseased corn. It is, therefore, of great importance, from a public health and an economic viewpoint, that knowledge of the disease be disseminated as soon as possible, and I respectfully request that the above manuscript be published for distribution, etc."

The actual number of confirmed cases

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of pellagra that were recorded at the time that Surgeon-General Wyman's warning was sounded (in 1908) approximated two hundred cases. Less than two years previous to this the number of cases upon record would probably be estimated as about ten. Now, contrast this with the number of cases recognized and recorded two years following this, pointing out the possible dangers of a pellagra epidemic, by Surgeon-General Wyman, and a conservative estimate of the number of cases would be three thousand.

Here it may be well to quote from Babcock, one of the deans of American pellagra, who, in an article upon the prevalence of pellagra last November, writes his conclusions as follows:

"It is now established that pellagra extends from the Atlantic to the Pacific, and from the Great Lakes to the Gulf of Mexico. The disease is, therefore, no longer merely of academic interest to the American physician, be he alienist or neurologist, dermatologist or general practitioner. It is probable that pellagra has occurred sporadically in this country for forty or fifty years, but it is certain that for the last three or four years it has appeared in epidemic form. Numerically, its prevalence cannot be accurately or even approximately stated, but its wide geographical distribution emphasizes the need of vigorous, intelligent investigation into its causation, prevention and treatment, on the part not only of the medical profession, but also of both State and Federal governments."

Pellagra appears to have received its first recognition about 1735, when it was observed by Casal among the Austrian peasants and described by him as *Mal de Rosa*. Its appearance in Italy dates from about 1750, and to Frapoli, of Milan, about 1771, we owe the name pellagra (Italian pella-skin: agra-rough). In 1784 the recognition of its importance was attested by the establishment of a hospital under royal authority for the study of the disease. It was observed in France and Roumania in the nineteenth century, and at the present time it is found in Italy, Roumania, some parts of France and Spain, in Egypt, Asia Minor, Austria, Bulgaria, and in other parts of Southern Europe; in India, Africa, Barbadoes, Mexico, South America, and in the United States.

Babcock has recently compiled a table showing its presence and recognition in thirty States and the District of Columbia.

It is not within the province or purpose of this paper to enter fully into statistical studies of pellagra, though I believe the following may interest you and further aid me in establishing the dangers which confront us in our failure to recognize the disease. In Italy, it is said, a conservative estimate would place the number of cases of pellagra from fifty to sixty thousand yearly. Roumania, with a total population of five million three hundred thousand, is also reputed to have from forty to fifty thousand cases.

Sandwith says that in the year 1901 to 1902 he obtained permission to examine five hundred Egyptian peasants, who were actually at work in the fields, and in every field he found early cases of pellagra, varying from 15 per cent., in the well-to-do provinces, to 60 per cent. in the inhabitants of the poorer hamlets.

(We omit the author's extended discussion of etiology, as the subject is yet in the very uncertain stage of controversy.)

Pathologic Anatomy.

The morbid anatomy is neither constant nor characteristic in a disease presenting such a variety of symptoms, and characterized by such great chronicity. One may find little changes at autopsy other than those usually found in any prolonged toxemic state. In the brain and cord, in some instances, difficulty is sometimes observed in distinguishing the brain and cord from general paresis of the insane; in other cases no gross changes can be detected.

Symptomatology.

Pellagra is both an endemic and an epidemic disease, which, for the convenience of description, may be divided into three forms: an acute, a chronic, and a typhus type, though here it would be well to state that this classification, in the light of our present knowledge, can be but an arbitrary one, as all forms are characterized by a toxemia, mild or severe in nature, and gastro-intestinal disturbances. Many cases show mental alienation, and most all show at some period during the course of the disease erythematous or skin lesions, in the presence of which no difficulty should be experienced in the diagnosis; though, in the absence of which, the diagnosis is at times difficult, and by many believed to be impossible. It is usually periodic in its manifestations, beginning in the early spring (latter part of February and

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March), ameliorating during the summer, with a recrudescence of the symptoms in the early fall, and usually with the advent of winter the symptoms disappear to such an extent as often to give the false impression of a recovery.

The Symptoms

May be divided for the convenience of description into three stages, though this will afford no idea of the duration of the disease.

First Stage (prodromal stage): Lassitude, vertigo, headache, general malaise, and mild digestive disturbances; later, in early spring, a sensation of heat in the mouth and stomach, altered taste; ptyalism may be often observed; tongue coated; examination of mouth shows redness of the mucosa, with vesiculation of aphthous ulcers. Diarrhea is often present, but frequently constipation is observed. In a short time the characteristic erythema appears, selecting usually the portions of the body exposed to the sun's rays; it is always symmetric in distribution, and with its appearance a sensation of burning or itching in the affected parts is noted. Muscular weakness is an early symptom, as the patient tires easily. Temperature, respiration and pulse all normal; no urinary changes. The knee, ulnar and biceps reflexes are usually all exaggerated.

Second Stage: There now appears an aggravation of all symptoms, digestive, skin and nervous symptoms predominating. The skin of the erythematous areas becomes thickened and covered with a hard, cracked pigmented epidermis, the tongue may become smooth and denuded of mucosa; the stomatitis becomes more severe, and the diarrhea grows more intractible and may be serous or bloody. Muscular feebleness more marked, gait unsteady and may be semiataxic. Frequently there are tremors of the extremities, and not infrequently a condition of tetany may be observed. The mental picture may present any of the forms of insanity with which the alienists are familiar in their many classifications, though the depressed or melancholic types appear to predominate in the literature of the disease. Suicide is not uncommon, and frequently death occurs by drowning, described as hydromania.

Third Stage: Usually the terminal stage, and characterized chiefly by marked cachexia and marked aggravation of all symptoms noted. Death results from cardiac failure, edema or some intercurrent disease.

The typhus type is one of profound infection—dry, coated tongue, profound prostration, dorsal decubitus, frequent bed sores, small, irregular pulse, and, unlike the other forms, an elevation of temperature is observed; delirium or stupor, and evidence of meningismus is not an infrequent occurrence.

Agreeing that the symptoms are complex and puzzling, the author gives more details as follows:

I will endeavor to relate briefly conditions as I have been privileged to study them in the twenty-six cases in which *I am entitled to priority in diagnosis* and study at the Philadelphia General Hospital and Insane Department, and an additional ten cases it has been my pleasure to see through the courtesy of the interne staff in the General Hospital, and an additional ten cases I have studied in the medical dispensary service of Dr. J. E. Hume at the Howard Hospital, and three cases in my own private practice. Several of the observations to which I shall call your attention I believe to be original, as the literature with which I am familiar in pellagra fails to record them.

Mouth.

Buccal mucosa red and congested. Stomatitis may be present and aphthous ulcers are not uncommon, in which the organism of Vincent's angina are most frequently met. Ptyalism is frequently observed, and by some writers supposed to be pathognomonic. In one of my cases this was so pronounced as to attract the attention of his fellow patients in the insane wards. Their comments may well be noted. Not infrequeutly they would call my attention to the lack of manners of the unfortunate individual, as shown by his continuous expectoration, and I have a knowledge of instances in which he was avoided by his fellow patients who were employed with him in light labors about the department, owing to the fear, as expressed by them, of contracting tuberculosis. This diagnosis I found to have been made by many of the insane patients as a result of this continuous expectoration of the saliva, a symptom of his pellagrous infection. Quite recently I have noted a bluish pigmentation and a brownish mottling upon the buccal

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mucosa, the latter upon the soft palate and pillars of the fauces and cheeks, upon the lips, and upon eversion and slight pressure, that is not unlike that found upon the palmar and plantar surfaces. The bluish pigmentation appears not unlike a petechial eruption save for the contour. At times it has a tendency to be darker and more confluent and to follow the lines of the teeth at their distal margins; it is also found upon the gums. This condition I have now observed in seven out of ten cases, and all of which had other undoubted evidences of pellagra. It was absent in at least one hundred cases studied and selected at random in my dispensary services.

Tongue.

Many varieties may be noted, any of which are believed to be characteristic and pathognomonic by various authorities. The beefy tongue is large, red, swollen, dry and fissured. The slick tongue is soft, flabby, pale, denuded of mucosa. The stipple tongue, in which the papillæ stand out prominently as small pin-point to pin-head pearly gray bodies, which have a black tip with the pearly gray base. The acid tongue, papillæ red and prominent, red tip, borders fissured and red, with a dirty gray-coated center. The cardinal tongue, one with the appearance of being daubed with carmine in splotches in center or over the whole tongue. The bald variety, in which the mucosa may appear denuded in plaques or the entire tongue may appear stripped of mucosa. I have observed all of these varieties in my series of cases.

Gastro-Intestinal Manifestations.

Pyrosis is not uncommon. A sensation of heat or burning at any point between the buccal orifice and stomach is also met with. Constipation is most frequently seen—indeed, in my series of cases was the rule, and in many instances most refractory. Diarrhea is also observed, and to me is usually dependent upon one of the several factors, *i. e.*, the degree of the toxemia, the nature of the coincident infection (ameba, etc.), or dietary indiscretions.

Quite recently Harris, of Georgia, one of the first to describe pellagra in the Southern States, has again called attention to the presence in the South of another tropical disease that may be, and probably has been, mistaken in the past for pellagra, owing to the diarrhea. I refer to Sprue or Indian Hill fever, or diarrhea, etc. Digestive disturbances in their many and various forms may also be met with.

Skin.

Skin manifestations are many and varied, and again peculiarly charactertistic of the disease chiefly through the appearance of the erythema on exposure to the solar rays, and in the periodicity, the symmetric and characteristic distribution, and the apparent control of that symptom through the protection afforded the skin by reason of modes of dress, etc.

Erythema is the first skin manifestation to make its appearance, and indeed it is to be doubted if it is ever absent, though I have noted same to be of a distinct transitory nature. In one particular instance under observation I noted a most pronounced deep purplish-red erythematous eruption fade, after removal from the sun's exposure, to an almost imperceptible pink-bluish, in the two hours interval between its first recognition and an endeavor to show same to one of my colleagues; later in the day to again have a return of the deep purplish-red color first noted.

The appearance of the erythema is usually limited to the portions of the body exposed to the sun's rays, by reason of the conventional modes of dress; though generalized eruptions involving the entire body have also been frequently recorded. It, however, usually manifested itself upon the dorsal aspect of the forearm and dorsum of hands. Its sharp definitions and limitations are singular and not to be readily mistaken for any other conditions. It usually spreads from the radial border forward and downward, and not infrequently in a triangular manner with the apex at any position upon the dorsum of the forearm (at the radial border) and its base the back of the hand.

It may involve the dorsal aspect of the wrist and hand, or its extension may be suddenly arrested at the second or third phalangeal joint. Its appearance upon the face in a mask-like manner was pointed out by Casal, and called Casal's mask. It may involve the entire face, the neck and under surface of chin being free from erythematous change. I have observed a case in which it fell as a mantle from the frontal folds of the skin of forehead to chin, and just outside the outer canthus of eyes and mouth, the remaining facial tissue free and sharply defined from the pellagra eruption, and in marked contrast to the affected

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areas. This condition is characteristic, and called the pellagra mask, though another condition is frequently met with, which is certainly suggestive and may be independent of, or associated with, erythematous changes. I speak of the physiognomy of dull, apathetic, ironed-out facies, which is most distinctive in some instances and also called by some writers the pellagrous mask.

The eruption may assume bizarre shapes, as the butterfly shape on face, using the bridge of the nose as body of butterfly, the forehead and malar processes as wings. It may also appear upon the back of the neck in this shape, or it may encircle the neck as a band called Casal's collar. It appears upon the dorsum of the feet, which may be involved alone or with the legs. The dorsum of forearms or the elbows and knees alone may show the involvement.

The erythema at first is followed by swelling, edema, a burning or itching, and not infrequently by vesiculation, which by coalescence may form large bullæ, and present a picture not unlike erythema multiformæ, a diagnosis I have myself made in a case of pellagra, undoubtedly classic in the light of my later studies and knowledge of the disease. Later on the skin scales, and it appears as a fine floury or branny desquamation that is most characteristic of the affection, and to me in this state is so readily distinguished from sunburn, a condition so commonly offered as an explanation and diagnosis for pellagra. You are surely familiar with the desquamation of sunburn, which is usually in large plaques, peeling and showing destruction of the corium, the edges of the burned area everted, and showing the margin of the healthy skin: in pellagra we deal with a productive instead of a destructive state. The fine floury or branny exfoliation appears to be superimposed upon the corium or skin itself, appearing upon the entire surface of the involved area or in small patches, and the border of the healthy skin is either indurated and above or on a level, though sharply defined, with no eversion, though slight inversion may be observed, due to atrophic changes. In the early peroid of pellagra the skin becomes thickened and cracked; later, with successive erythematous eruptions, atrophy occurs. The color of the erythema may be well noted as characteristic of the disease. In many cases it appears not unlike a light iodine blush; often as an erysipelatous eruption, or a deep purplish-red blush may be observed. Hyde points out an olive green or dirty green color when pressure is made upon the skin.

Hyde points out skin scarring, appearing as linear scars in the long axis and transversely, and usually parallel with the skin folds. I have also observed this, and in addition numerous small irregular-shaped and sized scars upon the dorsum of the hands and forearms, which only apparently involve the more superficial layers of the skin. An eczematous appearance is not infrequently met with. It may involve the leg below the knee, the boot type, or it may involve the anterior aspect of the leg below the knee and the dorsum of the feet. It may also involve the dorsal aspect of the forearm and hands, though it is not uncommon to meet it upon the elbows or knees, or both, as an eczema or a roughening and thickening of skin with branny scales. In one of my cases it made its appearance upon the back of the neck and upon the sternum, sharply outlining the figure of same, though extending slightly beyond the costal borders, its outlines not unlike a sword.

Nervous Phenomena.

As previously noted, insanity may occur as a result of pellagrous infection, and here it may be well to point out the apparent differences as to statistical reports of the percentage of pellagrins becoming insane. In Europe it is estimated from 5 to 30 per cent. In the United States it is possible 80 per cent. of the reported cases have been insane. This led to an erroneous impression that insanitay, *i. e.,* dementia or melancholia, was a necessary symptom to enable one to make the diagnosis of pellagra. It can be safely stated that, with a further knowledge of pellagra by the general practitioner, the statistics of insane pellagrins in the United States will decline until it reaches 5 to 10 per cent. The present high rate is but a relative one, due to the studies of the disease being limited chiefly to the insane asylums.

As to forms of insanity met I have observed mania, dementia præcox, senile dementia, general paresis, epilepsy, imbecility, alcoholic and hysterical insanity, the latter case being under observation for one week, by a most competent neurologist, as a possible cerebellar tumor.

Dementia is usually the terminal state of all forms of the progressive cases of

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pellagra. The reflexes, knee, biceps, ulnar, at first all exaggerated, later may be unequal, diminished or absent.

Babinski sign* has been reported. I have also found the Gordon and Oppenheim in several cases. Tetany has been pointed out by Ward, of North Carolina, and others, as a condition not infrequently met. This condition was observed by Dr. Spiller in one of my cases, and he also demonstrated Chorestek's and Trousseau's signs, heretofore believed to be pathognomonic of tetany. I have been enabled to verify these signs in many other cases I have observed. I have also demonstrated Kernig's phenomenon in two instances and other conditions excluded (I refer to arterio-capillary fibrosis, pointed out by myself in a previous article), and may be used as an indicator of the nature and extent of cerebral involvement.

Prognosis

is dependent upon its early recognition and the institution of prophylactic measures. The typhus type is most unfavorable, running a rapid fulminating course, usually terminating in death in from six weeks to a year. In the cases with poor hygienic surroundings, no prophylaxis and poor nutrition, the average life is from two to four years. With some effort at prophylaxis and regulation of the living and dietary conditions, their lives may be prolonged five to ten years; indeed, twenty years is not uncommon, and Lombroso reports a case under observation for thirty-five years with death from an inter-current affection. The prognosis may be summarized in all forms as unfavorable, unless with the early recognition of the disease suitable prophylactic measures are instituted.

Treatment.

Most unsatisfactory, as it must necessarily be in the absence of a definite knowledge of its etiology. However, it is not hopeless, providing it is recognized early. This has been most forcibly demonstrated by the Italian Government, whose recognition and strenuous efforts to control pellagra by making it compulsory to report the disease and immediately proscribing any locality where several cases of pellagra have been observed, and then placing government restriction upon the growth, maturing, milling, quality, conveyance and distribution of maize, with a resulting amelioration of all the symptoms and cases observed while the above restrictions were continued, combined with the free distribution of sodium chloride and nourishing food as a dietary for the afflicted individuals. Almost all the remedies in and out of the pharmacopeia have been tried: Arsenic, in its many combinations, as atoxyl, Fowler's Solution, etc., has its advocates; formalin has lately received the attention of the profession, administered as hexamethylanamin. Though, all said and done, our only success at present and our only hopes appear to be prophylaxis, summarized as a highly nourishing diet, proper hygiene and withdrawal of all corn and its products.

Our Duty.

The medical profession of Philadelphia and Pennsylvania have heretofore stood so prominently in the foreground in their efforts to promote the public welfare and the medical sciences, that it would ill become us to content ourselves with the efforts and labors of others while we complacently ignore the dangers and problems present in our midst. What higher ideals should we therefore hope to attain than to perpetuate Philadelphia's name and fame in the future, in medicine, by seeking in our presence a Laveran or a Reed to show pellagra's cause; a Pasteur or an Ehrlich to find a pellagra cure, and a Gorgas to lead the way in the application of the above knowledge in eradicating the disease? I believe it the duty of the local and State health authorities to join with the profession in the further investigation and elucidation of this most menacing danger and sincerely trust that the result may be to place us within the range of the above mentioned possibilities.

*[Cattell defines this sign as follows: "The slow extension of the great toe, elicited by stroking the sole of the foot; an early symptom of disease of the pyramidal tract."—Ed.]

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Study of An Imbecile.

By R. W. Shufeldt, M.D.,
Major Medical Corps, U. S. Army (ret.).
Washington, D. C.

It has only been within the last few years that the average general practitioner of medicine has paid any attention whatever to the study and comprehension of the two most important groups of diseases of the entire list of ailments with which the human family is afflicted. Reference is here made to those departures from the normal states presented on the part of the sexual and nervous systems. Most physicians in general practice possess but a very slender knowledge of even the rudiments of either of these, and are usually quite content, when they are confronted with cases in either of these groups, to pass them over to the care and consideration of the so-called "experts" in the profession. The reason for all this is not far to seek, but it would require altogether too much space here to even so much as touch upon this phase of our subject, as interesting as it is.

Matters, however, are now rapidly improving along these lines, and the outpouring of a new and comprehensive literature, taking fully into consideration the question of psychopathia sexualis in all of its departments, and the various psychoses, is the best evidence we have of all this. Physicians, of all classes, are passing more and more rapidly from beneath the sway of popular prejudice, prudery, ignorance and superstition, and in a few more years humanity will heavily reap the benefits of the movement. The diseases of the sexual system and the mind will powerfully engage the attention of all medical practitioners; medical colleges will demand rigid courses and final examinations in these branches, and very likely the law schools will require the same, to the end that the race will be vastly improved, and irresponsible victims of sexual and mental diseases will cease to be cruelly punished in the courts for acts they can in no way whatever help.

For many years past I have devoted considerable attention to the psychoses and the literature upon that subject. It has also been my experience to have had to deal with many cases so afflicted in men, women and children, in the lower as well as in the higher walks of life. These cases have greatly interested me, and in some instances I have been able to bestow upon them the closest attention and study.

From the earliest periods of childhood on to include adolescents, in either sex, we find them to be afflicted with a number of now fairly well defined psychoses, with which the psychiatrist is more or less fully informed. Most important among these we are called to consider all those mental and somatic departures from the normal states, characterizing the various forms of idiocy—idiots being divided into two principal groups, defined by the possession of the faculty of speech or its absence, they being known as the superior and the inferior idiots, respectively. Then we have moral idiocy or moral insanity, requiring considerable skill to differentiate and diagnose; cases of sexual perversion involving a mental affliction; the question of originary insanity; the cretins; dementia præcox and its various subdivisions; the insanity of epilepsy; all those cases traceable to hereditary insanity, and some few others, including those due to traumatism and syphilis, the last two being rare in childhood and youth.

It is my intention to devote the present article to a study I have recently made of a typical imbecile, extending over nearly four months, during which time I was enabled to give the case my closest and daily attention. Such a study is important for several very cogent reasons; for, in the first place, imbeciles, as such, are frequently the most dangerous and undesirable characters we have to deal with in the community, in the school, and in the home. It is the rarest thing in the world for the layman or laywoman to recognize or appreciate the abnormal condition distinguishing imbecility in any form, and even the physician in general practice is seldom able to pronounce upon this form of insanity in the child. It becomes all the more difficult for the reason that an imbecile is a superior idiot, and, so defined, the case is vastly different from what we recognize as the inferior idiot, which latter presents many entirely different symptoms and physical abnormalities.

A Case in Point.

We may now turn to the case here to be considered, and it will be seen that the data it offers will shed no little or uncertain light upon many a one like it to be found throughout the country.

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The subject is a Scandinavian boy just past his eleventh year who had come alone from the other side early in October, 1910, —the time when my examinations of him commenced. He is physically strong for his age and well developed, and with rather attractive features to the ordinary observer. He is slightly microcephalic, with the lower occipital region prominent and somewhat flattened superiorly. Peachy blonde, with clear blue eyes having a ptotic setting with respect to the upper lids as in plate III of Ellis' Criminal. Hair thick and cropped short. Ears well formed and somewhat prominent. Lips full and very red; blushes on slight provocation. Limbs slightly pubescent, with hands of the artistic type, and fairly well-formed feet. Apparently phimosed.

Mother was divorced from father, and the latter dead. Great musical talent in male ancestry, while the boy plays a little on the piano and possesses limited talent for drawing, but no other accomplishments. Family of good social standing, otherwise its history unknown to me.

He is inclined to be courteous and considerate in his bearing; honest; truthful in nearly all matters; but in his table manners and other particulars exhibits evidences of neglect in training, which has come about by his having been allowed to run at large with other children in the town abroad where he lived. This likewise accounts for his unfortunate instruction in sex matters, for I soon discovered he possessed vicious and imperfect notions of copulation; was given to moderate autoerotism, though neither had apparently in any way affected his health, physique, or sense of modesty. He is vacillating in his boyish aims, objects and manner, and extremely restless at all times. Amorous to a marked degree; delights in being continually caressed and kissed, and once remarked that he had "a whole room full of kisses" for the lady who was his temporary guardian. In all his conduct and attendance at school he is most exemplary, his teacher considering him to be a most gifted pupil. He sleeps well; eats heartily, and the usual visceral functions of his body are normally and regularly performed. Inclined to be tidy in his habits, and of markedly cheerful disposition and fond nature.

Such a case as this would be very likely to deceive almost any one, even a skilled alienist, and still more a court, were he brought before one for any offence, criminal or otherwise. For several weeks after his arrival he was extremely nervous, which was exemplified in his boisterous ways; constant grimaces, and eternal garrulousness, and hysterical laughter when nothing called for the latter. Language excellent, speaking Swedish and Norwegian, and is gaining English rapidly. Whenever possible he was the constant companion of his lady guardian, keeping ever at her side when possible, and following her about the house at all times.

Among his peculiarities, the first thing that struck me was his laugh, which, often loud, prolonged and semi-hysterical, reminded me forcibly of laughs I had often heard in the wards of institutions for feeble-minded children. This laugh annoyed his teacher in school. He suffered from marked asthenopia, and I recommended that he be examined by an oculist, but I am not sure that my recommendation was ever heeded. On a great many occasions, when directed to do things, he refused utterly to obey, and exhibited marked stubbornness of temper, often standing with flushed face in an attitude portraying decided insubordination. Upon my giving him the order in a tone that there was no mistaking he proceeded to do what he was told. Never, upon any occasion, did I lay a hand upon him, or punish him in any form or manner. He had the habit of "monkeying" with all small objects within his reach, and at all times; his eyes frequently crossing as he closely examined them. His memory was something remarkable, both for events and localities, and he once remarked that when at home (on the other side) he delighted "to punch little boys in the nose" to see them bleed when they made fun of him. While his teacher in the classroom considered him a bright pupil, the boys on the playground called him a fool. Up to this time, however, I did not suspect that he was the victim of any special mental affliction, though I considered him an uncertain, and, on occasions, a very unruly boy. My suspicions were first aroused when I noticed at his meals that he had a habit of frequently gazing at the ceiling, with his countenance a perfect blank, for a time often extending over as much as ten seconds or more. He was day-dreaming; but he came out of it normally, often looked ashamed that I had observed it, though he never, on these occasions, pointed at anything that he imagined he saw when in

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this state. Normal adults often do this, but never in the same way or with the same expression on the face, while in a child it is abnormal, and as a symptom is known as *originary*, and points to a hereditary taint of insanity, either near or remote.

About this time I began to suspect that this boy was afflicted with some juvenile psychosis, the nature of which was, to me, yet undeterminable. Considerable light, however, was thrown upon the case when, one bitterly cold evening, when his kind and patient guardian declined to humor him in one of his whims, he ran out of the house in the pitch dark and disappeared. Happening in about an hour later, I was called upon to make a search for him. I found him lying on his back on a pile of stones on the edge of a piece of woods in the near neighboorhood. He said it was his intention to freeze to death because his guardian would not do what he wished. Upon my commanding him to return, he, with sullen manner, complied. After entering the house and going to his room on the third floor, he broke out in a fit of fury, threw open one of the windows and screamed out that it was his intention to jump out and kill himself, and I am sure he would have done so had I not handled him with great caution and in a manner employed by those having had the necessary tact in dealing with insane patients. Here were two attempts at suicide on the same evening.

On the 23d of December, at a time when he was considerably excited over a Christmas tree that was being set up for him, he again took offence at some little thwarting of his wishes, and ran out of the house upon another very cold night to be gone for nearly three hours. Not being let in on his return at about 9.30 P. M., he crept under the front porch of the house and made the attempt to fire the building, and would have succeeded had it not been for the fact that sufficient inflammable material was not at hand for him to carry out his purpose. Here was a deliberate attempt to commit arson—and for revenge.

This boy was never punished upon any occasion in any way whatever, but, on the other hand, was humored in all his desires, as a rule, and ever treated with the greatest kindness and consideration. He would cry upon slight provocation, but was easily appeased by kisses and caressing.

After these experiences his mental condition now became perfectly clear to me, and I felt sure that I had an imbecile or superior idiot to deal with, a fact that became the more evident when I summed up and associated the symptoms and characteristics that the case presented.

We have here in the ideational sphere his marvelous memory, with good knowledge and use of language, both of which led his teacher to regard him as an excellent pupil and a bright one. Then there was his manner, conversation, laugh, general apearance and physique, and his history, all of which have been set forth above. Added to this we have his autoerotism, emotional traits, excitability, and easy susceptibility to both grief and anger. So blind was his rage upon one occasion that he destroyed his playthings and tore his clothing, and when the attack subsided he remembered nothing of it. In other words, under such conditions he was entirely irresponsible for his acts, and these later may be dangerous either to himself or to others. This is shown in his threats to commit suicide and his attempt at arson. Moreover, when teased or ridiculed by other boys he is very liable to attack them with fury, destroy an eye or commit other bodily injury, and thus submit those responsible for him to an action at law for damages. As puberty is approached and passed imbeciles become still more dangerous in the community, and when the attempt is made to bring them up in their own home later on they become the most dangerous and undesirable individuals the police have to handle.

Punishing them in any way is useless and decidedly harmful. Proper education and treatment in an asylum for feebleminded persons, or in some institution for their kind, offers the only hope to mitigate their special psychosis. They are incurable, however, and unfortunate members of society—unstable additions to any trade or profession.

They should never be treated in the same institution with inferior idiots for reasons that are very obvious. Without stating what my diagnosis in this case was I submitted the history of it to the distinguished alienist, Dr. Max Talmey, of New York City, who at once came to the same opinion in regard to it that I had previously formed. This was likewise the case with Dr. Wm. A. White, superintendent of the Government Hospital for the Insane, at Washington, D. C.

Dr. Max Talmey has pointed out in his

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"Psyche" that "Imbeciles are incapable of imbibing certain conceptions. Although they have heard of duty, honor, friendship, filial love, etc., and know the terms well, they are not fully alive to them. Normal persons, having acquired these ethical conceptions through education and association, experience a certain feeling, are put into a certain mood whenever their mind is turned upon such ethical subjects. This feeling influences all their actions. Imbeciles, however, lack the normal affective tones accompanying ethical ideas, and are, therefore, unable to conform their conduct accordingly. No sense of duty is inculcated upon their mind, notwithstanding the best education they may have received." Later on these characters will, in all probability, be demonstrated in this boy's case.

The Burden of Prudery.

By Dr. G. Henri Bogart,
Brookville, Ind.

One of the terrible tragedies of society has just pased across my view, one of those unsuspected, all too common elements of life, many fold more tragic than death.

Yes, it is a woman. She is one of the noblest women I have ever met, intellectual to a high degree, pure, strong, progressive.

She possesses the remnants of a glorious vitality, else she had not lived to inspire this paper. I learn that as a housewife she is a model. She reads and digests the foremost thought of the day, and, with it all, finds time to assist her husband in his business, not from mere acquisitiveness, but to "be up and doing."

She has been married for fourteen years, and her desire for maternity is such as could be expected from the character which I have so feebly tried to portray. And the world needs progeny from such women as she is, where her natural mental and physical equipment would bring a splendid heredity, to which her capableness would have been a guiding star—and yet she will never be a mother.

She wrote me for a consultation as to the dictum of her physicians concerning her sterility, and I had to confirm the verdict—and to go farther and enjoin that she should safeguard her own strength lest she succumb. In a voice vibrant with tears she exclaimed, forgetting my presence, "Oh, my mother, my mother; why in God's name, did you lay this burden upon me?"

The sight of a soul torn and laid bare by the sentence of hopelessness is trying, but there was nothing for me to do but to sit powerless and allow the paroxysm to pass.

She told me of the home life of her girlhood, aristocratic, secluded from the rough blasts and from contact with the world.

In her fifteenth year she first menstruated, and when she arose that first morning and discovered the flow she was horrified at the unknown thing that had come to pass.

The mother discovered the condition, and led the shrinking girl into the chamber, scolded her for soiling the bed linen, gave her napkins, and told her how to apply them, and nothing more.

That period was a nightmare of terror and humiliation to the sensitive child, and succeeding flows were but little better.

She had noted that a neighbor who had suffered from a hemorrhage had been packed into ice to restrain the flow of blood, and so in winter she would sit on snowbanks and in summer use cold packs or the cold sitz bath—and this continued for two years.

Then a comrade explained the phenomenon to her, but it was too late. But for her wonderful vitality she had needed an undertaker, but as it is she is an invalid and her life is ruined. She is not a whining hypochrondriac, still she breaks down one or more times annually, and the family knows of it only when she is found collapsed.

As an instance of her innate motherlove one who knows her well told me this anecdote: One day she was standing on the wooden platform of a country railroad station, while a freight train was pulling up to the siding to allow a train to come in. A lout of a boy tried to jump onto the side ladder and fell into the narrow space between the platform and the wheels, one leg being cut off as he fell. He began struggling to rise, when she threw herself onto the planking, reached down and held him down until the train had passed, else he had been ground to pieces. Her own hat was torn away, so close was the space, and her beautiful gown was all bloody and grimy. She fainted. On being restored she was asked what made her do it, and she answered, "I thought so of his mother."

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She had never before seen the boy.

And this woman, so grandly equipped by nature for motherhood and so swelling over with motherlove, shall not leave to the world the heritage of a line of descendants because the damning shackle of prudery held that "ignorance is innocence."

I am proud of the race every time I open one of the modern magazines and find therein those truths of eugenics, the true rendition of "Know thyself," for it shows that the real world of man and woman is coming into the reality of life.

The double sexual standard and the guarded teaching of ignorance have strewn the walks of earth with countless wrecks, which our profession, from the summits of attainment, may never restore.

Doctor, I would that I could take this story, with all of heartache that it means to me, and carry its fullest import into the soul depths of every mother on earth, but I cannot.

I can beg you, each and sundry, however, to use the social and directive power which the prestige of your profession gives to you, and to join in teaching the mothers what they should teach their daughters.

The world movement, which is seeking to safeguard our race by the plain truths of sexuality, is a new revelation. You are its ministers and let us, every man, work for uplift.

Philadelphia Research Centers.

Seventeen endowed institutions for original research in diseases exist at this time in the United States, and it is a matter for honest civic pride that Philadelphia is fully worthy of four of these important features in medical teaching: the Ayer Clinical Laboratory, on Pennsylvania Hospital grounds; the William Pepper Clinical Laboratory, at the University Hospital; the Phipps Institute for the Study of Tuberculosis, at Pine and Seventh streets, and the Wistar Institute of Anatomy, as part of the University of Pennsylvania.

Even in his early day, Benjamin Franklin observed that persons exposed to the weather did not take cold, while those exposed to other infected persons did. General Sherman made the same observation among his soldiers in the campaigns of the Civil War.

A fairly good window tent can be made by taking an ordinary awning and transfering it to the inside of the window.

Doctor, in sending in your subscriptions tell us what department of *The Council* you like best, what you would as lief see dropped and what new feature you would like to see added.

A Case of Hysterical Mania.

By Benjamin Edson, M.D.,
Brooklyn, N. Y.

The case here reported contains some notable features that seem to render it worthy of record.

Mrs. E. L., 42 years of age. Mother of one boy, 8 years old; was seized about 2 A. M., September 19, 1910, with excruciating pains in the right lower quadrant of the abdomen. The pains were intermittent, occurring in paroxysms at intervals of from 3 to 8 minutes and lasting about the same length of time.

She screamed, threw herself wildly about the bed with her hands pressed over the seat of the pain. The right knee was drawn up, presumably to lessen the tension of the abdominal muscles; the right rectus abdominalis muscle was tense, and palpation and pressure revealed unnatural firmness and hardness over the region of McBurney's point.

In these days, of course, we are all looking out for appendicitis, and here were enough characteristic symptoms to at least point in that direction. But there *was no rise of temperature.*

Local applications were out of the question on account of her frantic and violent activity. Morphine, gr. ¼, with atropine. gr. 1/150, was given hypodermically, and repeated twice in the three hours that I remained with her. This gave but partial and temporary relief.

In the evening of this day Surgeon A. T. Bristow was called in consultation. After thorough examination appendicitis was excluded, and the case decided to be one of pure *hysteria.*

The next day the attack returned, but in different form. There were no further symptoms of appendicitis, but chiefly alternate attacks of laughing and crying. This was soon followed by wild delirium, delusions, hallucinations, shrieking, trying to escape from all sorts of threatening evils, protesting against being operated on for appendicitis—although the word had not been spoken in her hearing—struggling to escape being run down by an automobile. So violent was she that it required the best efforts of two strong persons to restrain her.

She now persistently refused food, drink, medicines, everything. We had about four days and nights of this circus, in spite of

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such sedatives, narcotics and anodynes as we could administer. The blood-vessels were kept reasonably full by enemata of normal salt solution.

Dr. William Browning, alienist, was called in consultation. In fact, he saw her four or five times during her illness, and his suggestions were followed, so far as practicable.

And here a brief history leading up to this attack will be in place:

On the 6th of September preceding she was injured somewhat in a collision with an automobile, receiving a number of bruises, but no fracture or dislocation. She suffered from profund *shock*, and was confined to her bed for about a week. During the next week she was up and about the house, attending to her household duties.

She is a woman of rather unstable nervous condition, and it is stated that before her marriage she was restrained in a sanitarium for some form of nervous affection, the exact nature of which is not now well known.

Why her attention was directed to the region of the appendix may be explained satisfactorily by the fact that her menstruation was due somewhere between the 6th and 19th of Septembr, and in consequence of the shock of the accident was suppressed or deferred. Congestion or concussion in this region might pardonably be suggestive of appendicitis.

After trying various devices to quiet her, all in vain, in desperation I gave her, September 21st, a hypodermic of hyosine, morphine and cactin.

This was followed by sleep, really the first good sleep in this attack. After 3 or 4 hours she came out from under its influence, and was soon as wild as before. The H. M. C. was repeated. In short, we found it necessary to keep her under this influence, and from September 21st to October 1st she received hypodermically fifty-five (55) full strength tablets of H. M. C.

On the 1st day of October she knew and recognized me for the first time during this illness. From this time the H. M. C. tablets were rapidly diminished, so that by October 12th only a single injection was needed to induce sleep, and at night—and this was soon dropped entirely.

It may be said that this was heroic dosage, but any one who saw this patient will readily admit that so desperate a case justifies the use of heroic measures.

From this time forward, with tonics and strenuous feeding, she improved rapidly, and on October 26th menstruation was resumed.

November 13th. Relapse; violent again; melancholy, crying pathetically; wants to go home.

November 20th. Change of surroundings seems to be of much benefit. Drugs practically stopped. Only sulphonal and veronal enough to secure quiet and sleep.

December 20th. Is fairly well; and so continued.

While hysteria simulates the form of almost every known disease, it is not always easy to determine the boundary line where hysteria ends and acute mania begins. In this case the two seem very closely associated, one running into the other.

Had this woman received a fracture of limb or skull it would not have been difficult to convince an ordinary jury that she was seriously injured and proper compensation for personal injuries would most likely have been readily awarded. But injury to the nervous system from concussion or shock not being so obvious to the average layman, and fully appreciated in its seriousness only by the physician or the alienist, throws it unfortunately into the category of the ever-mooted "Railway Spine," the accurate determination of which is always problematical.

83 St. Marks Avenue.

Who Can Pass the Examination?

To The Medical Council:

Do you think many of us doctors that have been in practice forty years could get within gunshot of the chemistry examinations given in these times? I don't, yet these State Boards expect all of us to be living encyclopedias, or no go.

W. L.

Very few physicians who have been out of college as long as even twenty years could pass the present day examinations in any but the application branches—practice, surgery and obstetrics. We heard an eminent New York surgeon, who was at the time president of the American Medical Association, say at a medical gathering in this city, that he could not pass an examination, and he didn't think any one present could. Yet in that same year we heard Dr. McCormick, traveling lecturer and organizer for the American Medical Association, in an address before Philadelphia physicians, say that he was working

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for the attainment of the end that every physician would have to undergo re-examination every five years in order to be allowed to continue in practice.—EDITOR.

Medicinal Plants.

To THE MEDICAL COUNCIL:

Will you kindly give me particulars in reference to the raising of or cultivating medicinal plants, such as golden seal, ginseng, and others? I think, with you, that physicians should have some divertisement for pleasure and profit.

E. MICHEAU, M.D.

St. Michaels, Md.

[We much prefer to present this subject for answer by our readers, many of whom, no doubt, in different parts of the country have acted upon the suggestions we made a few years ago, and have more or less actual experiences to relate.—ED.]

Perspiring Feet.

EDITOR MEDICAL COUNCIL:

I have a patient that is troubled with perspiring feet. He is 21 years old, and is healthy every other way. He has been troubled with sweating feet all of his life; feet sweat so badly that it soaks through his shoes. Please give me your best remedy. G. W. TAYLOR, M.D.

Nolan, W. Va.

Use the following powder:

℞ Salicylic acid .....2 drams
Dried alum .....3 ounces

Powder thoroughly.

Wash the feet and dry them, and apply the powder; also sprinkle a little of it in the stockings.—ED.

Thiosinamine for Peritoneal Adhesions.

EDITOR MEDICAL COUNCIL:

I cannot afford to miss a single copy of THE COUNCIL. Your editorials are worth many times the price of the journal. For instance, a few years ago you gave us the facts about thiosinamine. I soon had an opportunity to use it in a case of adhesions following peritonitis. The diagnosis had been made independently by two competent surgeons and the patient informed that the only hope was in an operation. Thiosinamine, *per orem*, cured him and he remains well. Of course, careful attention was given to digestion, etc., but that had been done before without avail, so it seems safe to give credit to thiosinamine. Has it been used successfully in urethral stricture? A. R. PENNIMAN, M.D.

5614 Clemens Ave., St. Louis, Mo.

Doctor, what are the three most prevalent diseases in your practice by number of cases?

In what diseases or surgical conditions does the general family physician most need practical instruction, based upon your own experience and also upon your observation of others?

What subjects would you like treated in the near future in THE MEDICAL COUNCIL?

The Business Side

OF MEDICAL PRACTICE

While we, as physicians, desire to be scientific students and practitioners of medicine, yet we desire also, for the welfare of our dependent ones and for the sake of our standing in the community, to secure a fair compensation for the services we render to our fellowmen.

Eliminating Competition.

We often hear it stated that the overcrowded condition of the profession is a great hindrance to the professional and financial success of the average physician. This is true, but hardly more so than it is true also of the legal profession. Some of the other professions, as engineering and other scientific pursuits, teaching, the ministry, etc., are not so overcrowded.

There are two ways by which one may honorably assist in relieving the overcrowded condition of the profession in his community, and if the physicians in each community will practice these it will result in relieving the congested condition in the country at large.

The first of these is by using your influence to deter many aspirants from entering the profession. The standard of professional attainments should be constantly higher and higher. Other branches of science, industry and learning are advancing rapidly, so why not ours? We should impress upon the student of mediocre abilities and of insufficient education the fact that the practice of medicine offers very little in the way of financial reward or of ease of living to any but the very exceptional few who are favored by unusual circumstances. Show him the long and toilsome as well as expensive road that is before him in making his preparations for entering the profession. Then show him the tedious period of waiting, when he feels the fire and ambition of youthful energy and yet has no outlet for it in his profession. Then the drudgery of attending to a practice and of building it up, with the possibility that an unfortunate case or two

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or a spell of sickness or an accident to himself may tear it all down again in a very short time. Show him the brilliant opportunities there are in this new country of natural resources of making a far greater success financially in some other enterprise. Show him that sometimes success is actually reached before the medical student could even commence to practice. Occasionally—not more than once in a lifetime—some young man of brilliant natural attainments and thorough education and with a genuine call to the science may come under your observation as a medical student. We need not say to you to let him go through, for nothing short of death or calamity can stop him; but such a student will aid you in the uplifting of the profession and you will lose nothing by giving him encouragement.

It is no exaggeration to say that one out of every two persons who take up the study of medicine would have been better adapted to something else.

Now for the second way of eliminating competition. In almost every community there occur opportunities for some one to take positions of honor or profit aside from what they are following as their regular calling. It may be public office; it may be some other opportunity. If a fellow practitioner aspires to such a position you can render him a professional service as well as reducing the number of practitioners in your community by aiding him in every way possible. Even if he should not, out of gratitude, turn over his practice entirely to you, still you will get your share of it among the other physicians in your community. Yet how often do we see physicians, through a spirit of jealousy, throw obstacles in the way of the ambitions of a brother physician. This is one case in which being brotherly pays in a financial sense as well as in an ethical one.

The third method will not be so popular, and its application is attended with some concentrated and continued effort. There arise from time to time various cults professing to cure disease by some special new method. As the specialty of the practicing physician is therapeutics, the treatment of disease or, more properly, of the sick, it is his duty to study the method of treatment of all the different sects that have come into practice or will hereafter come into practice. This is not such a serious task as it first seems. Take osteopathy, for example. Any physican well qualified in anatomy, physiology and pathology can obtain a pretty thorough comprehension of the principles and practice of osteopathy in from one to two months' study during his leisure time.

And so it is with all other special methods of treating diseased conditions. There is generally a foundation of a few facts in their mode of treatment which are true and which give them success in a certain line of cases. It will be to the advantage of the physician to learn these so that he can adopt them to his practice in so far as they prove to be better than what he is already doing. This will do more to make his position in his community unassailable than anything else we can recommend.

We think it very important in rural districts that the physician take a course in refraction in a reputable medical college, so that he may successfully meet the traveling optician.

Protect the Community.

Protection is the key-note of the physician's mission. When he sees persons headed in the wrong direction he cannot refrain from shouting a warning to them. But he may, if he will, protect them from financial folly, as well as from physical ills.

Every reader of these lines should do all he can to warn his clientele against wild-cats—*and every luridly written advertisement of exploitation or promotion* that comes to him by mail *is a wild-cat.*

Doctor, show this department regularly to the editor of your home paper and show him how much he can save to the commun-

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ity by giving them repeated and constantly repeated warning—and the more specific it is made the better will be the result.

To-day there are thousands of promoters and "fiscal agents," in their luxuriously furnished offices in our large office buildings, receiving in every mail the hard-earned savings of the fools and suckers—and laughing at their victims while they open the envelopes. These swindlers are living at a high pace in a luxurious manner at the expense of honest people whom you and I ought to do our best to protect.

Doctor, read these pages at your medical societies, and wherever you can get people to listen to you, until the sending out of swindling literature will no longer be profitable.

Investments; Warnings.

It is as important to invest well as to save. Read the following notes on some so-called investment propositions:

Florida.

Ever since the Spanish cavaliers proclaimed this the land of perpetual youth discerning people have believed in the solid value of the State and of the good soil that is to be found there, aided by the wonderful climate, which favors the perfect development of many sub-tropical products. However, as Madame Roland said, "O liberty, how many crimes have been committed in thy name!" So we say O Florida, how many swindles are put through based upon thy good reputation! Land companies are booming absolutely worthless tracts and selling them with the declaration that they are valuable soil, or they are selling farms that are deep in the Everglades or that are overflowed at every high tide from the Gulf of Mexico. A friend of the writer who has just returned from Miami says that it is pitiful to see men landing there with their families and household goods to take possession of a farm which they have paid for with their savings, and to find that the farm is from three to ten feet in water in the Everglades, with no prospect of drainage in sight, possibly not before ten years. If they have not enough money to go back home they must remain and seek work at whatever they can get to do. This scene is being enacted every day. This warning should go abroad to the remotest parts of this country, especially through the North and Northwest, where most of the victims come from. Moral: The only way to buy land is to see it first and, if you are not a suitable judge of its value, hire the services of some one who is.

Northwestern Apples.

Our advice to every one in the East and the middle West is not to let any one sell you acreage in Pacific and Northwestern apple orchards to be developed by the person who sells to you. As we have pointed out before, apples are now being produced in at least a dozen of our Eastern and Middle States equal in value to the best of the western apples and with much less expensive marketing. In five years from now fine apples will be a staple product and will be reduced to competitive prices. This, aside from the fact that the person selling you the land may or may not develop the orchard for you as honestly as you would do so yourself. An apple orchard in the East will soon be worth as much, acre for acre, as in any part of the west.

Again we express the opinion, asked by many readers, that the "Fortune Colony" will never make a fortune in the insurance business and from the circulars we think any physician would be foolish to put his money in their keeping.

We do not hear anything of Julian Hawthorne lately. Wonder in what quiet way they are operating now. Those who haven't "invested" probably still have their money. Our advice is to keep it.

A few years ago we showed the preposterous character of the claims made by the Peruvian Gold Mining Company, put forth from Toledo, Ohio. Have any of our readers had any experience with this company?

You do not need us to tell you not to put money with H. L. Barber & Co., Chicago, for oil or other speculation. When you see their "literature" your own judgment will be a sufficient guide.

Are there really valuable diamond mines in Arkansas? Some of our subscribers are receiving prospectuses of such, and we would be thankful to any Arkansas reader who would write us the desired information.

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"Bad Investments."

EDITOR MEDICAL COUNCIL:

Natural gas was discovered in Lancaster, Ohio, in 1887, after more than a year's delay in drilling the first well. The first three wells were drilled by small stock subscriptions. These wells were bought by the city, which paid for the stock and 6 per cent. additional. The city then vigorously pushed the drilling of gas wells and saved the citizens thousands of dollars in their fuel bills. The gas territory soon passed into the hands of large corporations, while private individuals made but very little out of it.

Oil was not discovered until about 1905. The first company was capitalized at $25,000. It made good dividends and sold out at a large profit. The second company was also capitalized at $25,000. It has also paid 20 or more 50 per cent. dividends and then passed into the hands of the Standard Oil Company. Dozens of other companies were organized, capitalized at from $25,000 to $75,000. A very few were successful in paying dividends. The most of them were failures, in spite of the fact that over $2,000,000 was invested in the development.

I put $50 in one company, which was greatly misrepresented to me. It was a total loss. Had I known the real intentions I would not have risked a cent. I put $100 in another company, which also was greatly misrepresented. This was a total loss. I put $75 in another company. While apparently honestly managed, it failed to get oil, and returned me but 57 cents. I put $75 in another company, which was unsuccessful in getting oil, though fairly well managed. This company has a little money left and is endeavoring to arrange to drill again. The chance is very small of ever making anything out of it. I put $25 in another company, which has an oil well, but is not likely to pay back more than 50 per cent.

My father lost $300 in nearly the same lot of companies. These companies, on the whole, were capitalized very low, and fairly honestly managed, but nearly all were failures.

What, then, is the investor's chance when the capitalization is high and the management dishonest? Ours were home companies, and I realized that the risks were great even then.

As this development brought us business in another line my loss has, in some measure, been regained. There is nothing which pays as fast as gas and oil when successful.

There are many reasons why oil companies fail, even where honestly intended. First, lack of knowledge of the drilling business; second, lack of business knowledge and experience in any line; third, it is a very hazardous business anyway, as Rockefeller testified. The best investments are real estate, building and loan, and bank stock in your own town. Municipal bonds are safe and desirable, especially where exempt from taxation, as in Ohio. Safety of principal is the supreme consideration, let the interest be ever so small. It is better to be sure of 3 per cent. and principal than to take chances on principal and hope for 7 to 10 per cent.

Before buying any stock find out all you can about the capitalization and the resources, and the amount of watered stock taken by the promoters. Is it an old established business or a new venture? Who are the backers, and what is their standing?

There are so many plausible schemes afloat that it is almost impossible for the ordinary man to tell the good from the bad. [They are nearly all bad.—EDITOR.]

Speculation injures a man's credit and backers are wary of such an individual. Don't try to get rich quick. "It is a very hazardous business."

Leases may be juggled and profits in stock companies diverted into the pockets of the promoters in a perfectly legal way to the great loss of the innocent shareholders.

C. C. CARTER, M.D.

Lancaster, Ohio.

Advice to Readers.

I. *From the Journal of Therapeutics and Dietetics.*

Nebraska—I am offered the stock of the Boston Securities Company. Would you advise its purchase?

Editor—I would distinctly advise its sale, as it has practically no tangible assets aside from a contract with the Boston Mutual Life Insurance Company, and has ceased dividends whose only reason for existing was to promote the sale of stock which now has little market value.

New York—Will you kindly advise an

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investment in copper stocks, giving a list of the best purchases.

Editor—There is no such thing as an investment in copper shares, as the industry precludes the possibility of anything but the rankest speculation in these shares.

Maine—Are the securities of the Oxford Linen Company a safe investment?

Editor—The shares of the Oxford Linen Company are extensively advertised, and the promotors are now offering a final allotment at $15 per share, while the same stock is offered on the "street" at $4.50 per share, which should be sufficient proof of the character of this stock as an investment. They have a mill in operation, but little in the way of information other than an effusion of florid generalities is obtainable.

Massachusetts—Will you kindly give an opinion on the stock of the Sanitol Company and that of the American Druggists' Syndicate?

Editor—Both of these stocks are of a highly speculative character, and will in all probability sooner or later be counted among the has-beens, and we should distinctly advise against such purchases.

Ohio—I have received circulars advertising the stock of the Boston Security Company, and would like your opinion of this stock.

Editor—This is one of the holding companies that have been formed to finance insurance companies, and like the rest of them has little assets of tangible value and has a very narrow market at declining prices. We would most emphatically advise you to let it alone unless you have money to throw away.

II. From the *Financial World.*

The "Sterling" Policy.

With that suavity to which every scholarly gentleman trains himself who believes the world owes him a living, and owing it allows him to live by his wits and upon the credulity of the public, the Sterling Debenture Corporation has outlined its policy in a recent advertisement. This is to furnish capital to American enterprises capable of undergoing a careful investigation.

The hulk of the gutted American Telegraphone Company is an exhibit of how well the Sterling policy works out for them. In the end, for the supposed 45,000 satisfied customers, the outcome will be far different.

What is More Natural?

If the Lincoln Stock and Bond Company did not advise investment in California Consolidated Oil Company at what it thinks is a low price, in preference to every other security, the people whom it addressed would put their money elsewhere. Therefore it is natural for the concern to have a preference for that out of which a big profit comes to it. The intelligent man will prefer many other securities to this oil stock which has for its principal asset Admiral Robley D. Evans, retired.

Seven Careful Brothers.

If it is their own bread to be buttered the Guggenheims are not at loss how to do it. Witness, for example, the prosperity that has come this year to the Guggenheim Exploration Company. The net earnings were equal to 16.1 per cent. Outside of the seven members of the family few hold any of this stock. If the company were less a money earner the brothers would hold little of the stock. All the good mines the company owns—all the other mines the seven brothers sell to their other companies, in which the public are the heaviest holders.

Collection Hints.

Any one may sell or assign an account without consulting the debtor.

All formulas and methods are good in a way, but do not fit all customers.

A very clear understanding should be had when the credit is given as to how settlement is to be made and as to time of payment.

When a time is fixed for payment, if necessary to go after the money; do it, or have a collector do it, at that time.

Small accounts are often the most troublesome to collect, even from people abundantly able to pay larger ones.

Don't allow your sympathy to override your judgment.

Don't use rubber-stamp duns, or make lengthy explanations of why money is wanted, but just short, respectful statements that bills are due and payment expected.

As in every other line of accomplishment, energy, interest and attention are the elements absolutely necessary for success.

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Collect While the Knowledge Is Fresh.

The appreciation of people for relief is well illustrated by the experience of a physician in Arizona. He was summoned to a case of gallstone colic, and between groans the old rancher said, "Doctor, if you will cure this pain, I will give you every horse I've got." He had about ten thousand horses. The next day, feeling better, he said, "Doctor, when I get well, I'll give you the best horse on the ranch." The third day, with the pains all gone, he said, "Well, doctor, I am much obliged to you. When you want to borrow a horse come up."

Is it any wonder that certain physicians try to make a contract while the patient is real sick? Short accounts make long friends.—*Physicians' Business Journal.*

Jottings by the Way.

"The wish is father to the thought" and the promise is often father to the cure.

One reason why many doctors seem "born to blush unseen" is because they are unwilling to "waste their sweetness on the desert air."

It seems very strange that we see so many beautiful actresses on the stage but only homely theatrical women in our offices.

The doctor who, when he "arrives," turns to review the procession of his accomplishments, is as foolish as the chap who runs to cross in front of the locomotive and then stands to watch the cars go by.

"Every man is the architect of his own fortune," but medical architects, in estimating the cost of the structure we call success, usually count the cost at about the half of what it finally comes to.

"The poor we have with us always"; poverty keeps many from seeking hospital treatment in the sections far removed from cities, but this class of cases, if handled judiciously, are the greatest blessing to the young man who has aspirations, for they constitute a large percentage of his first cases: if he gives them good and faithful service they will become an asset in the way of experience, and will repay him many times over for the money and effort bestowed upon them. Do not send them to some distant hospital or clinic as charity patients and let the community pay their railroad fare, and thus convince them that they are paupers, but take the burden that belongs to you and convert it into a blessing.

The less a man has in his skull, the more he needs in his pocket.—*H. L. Meader.*

The Much-Abused Title of Doctor.

Our scholarly contemporary, the *Interstate Medical Journal,* of St. Louis, after showing how the Osteopath, the Naturopath, the traveling optician and others, equally received the cognomen of "Doctor," makes the following suggestion for a remedy:

"After studying the conditions, as they exist in all our large cities, are we wrong in saying that it would be advisable for the qualified practitioners to take the matter in their own hands, if they hope for a fruition of the desire to elevate the title of doctor of medicine to the heights upon which it rested until it was dragged through the mire by the unscrupulous? Would it be futile to evolve a plan such as this: All qualified practitioners be compelled to write "doctor of medicine," *i. e.,* Dr. med. in front of their names?—a compulsion that should show no laxity, since its object is not only to instruct the people at large, but prevent the osteopath, the optician and others too numerous to mention, from arrogating to themselves an honor that, on account of its bastardy, is to-day an exceedingly commonplace designation. Now this may sound Utopian, but it is done in other countries—namely, in the German speaking ones, where systematization is a cult that it would be well for us to follow. Almost immediately the line of demarcation would plainly show who is the doctor of medicine and who is the doctor masquerading in soiled and tattered garments that must be cautiously arranged to hide his ignorance."

Doctor, do you receive a promotion paper entitled "Truth," from Anthony Raisner, New York? Error sometimes masquerades under the guise of Truth, you know. Look into the Dial Register pretty closely—as, indeed, you should in any proposition—before you conclude to invest.

Luck.

By Max O'Rell.

Luck means rising at six o'clock in the morning;
Living on a dollar a day if you earn two.
Minding your own business and not meddling with other people.
Luck means appointments you have never failed to keep;
The trains you have never failed to catch.
Luck means trusting in God and your own resources.

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Compensation for Medical Services.

Whatever may be the true explanation of the present high cost of living, and newspaper and magazine writers have discussed and defended every possible theory to account for it, the fact remains and is forcibly brought to our attention every day that it takes about $1.75 to buy what ought to be bought and what a few years ago could be bought for $1.00. There are perhaps none in the community, with the possible exception of the small salaried man, who suffer more from this increase in the cost of the necessities of life than do physicians. The wage-earner has seen his wages steadily increase with the increased cost of living; the shop keeper makes the same margin of profit, or a larger one, than before; the capitalist and the man of large investments sees his wealth accumulate more rapidly than ever, but the medical man who is facing a steadily growing competition, not only from the constant increase in the number of educated physicians in all communities, but also from the many new forms of quackery and therapeutic fads which attract large numbers of those who should be his patients, the medical man, we repeat, sees his income steadily diminishing and at the same time sees his dollars shrink in size. In addition to the increased competition in the practice of medicine, new methods of prophylaxis and treatment, which physicians themselves have discovered and introduced, are constantly reducing the number of cases of sickness and shortening their duration, so that the physician sees fewer patients than formerly, makes fewer calls than before on those he does see, receives, as a rule, smaller fees, and can purchase much less with the fees which he does receive. He must keep about the same standard of living as before, the cost of the equipment of his profession, like everything else, is higher than ever, and so the financial problem of his life becomes more pressing every year. What of the future?

We are not prepared, of course, to solve the problem in all its phases, perhaps not in any of them, but there is one point of view which we would like to call attention to and to emphasize. We stated above that there is less sickness than formerly and that very many diseases run a shorter course than used to be the case. This means that the cost of sickness, both to the community and to the individual has been much lessened. This reduction in the cost of sickness has been brought about by the medical profession and thereby the world has incurred a debt to our profession which we believe should, after some fashion, be paid. It cannot, of course, be paid directly, but there must be some kind of readjustment in regard to the compensation of physicians for their services which shall correspond in some degree to the changed conditions of medical practice. The general practitioner is the hardest hit, for his cases of typhoid, of diphtheria, of scarlet fever and of infantile diarrhea are becoming fewer and fewer, and he makes fewer calls upon those he does see.

Now we are not for a moment deploring this triumph of medicine over disease; we boast of it and glory in it, but we also feel that the increased value of our services is deserving of increased compensation. This can be brought about by a general increase in our charges to those who can afford to pay, and it can be brought about for the general practitioner, the family physician, by adopting a method which we have long felt ought to be adopted by him. Why not abolish entirely the old-fashioned plan of charging so much a visit and carefully recording the number of visits made and charge, as the surgeon does, a lump sum for the whole period of each service? It is certainly not adequate compensation for having cared for a well-to-do patient through a case, for instance, of typhoid fever which has entailed say fifty visits, to charge exactly three dollars a visit. We believe that such a service is worth twice or perhaps three times that amount. We believe that the time has come to give up our so-called fee bills which established a fixed price for each visit and for each service, and have a general understanding that it is impossible to itemize our accounts at all. Let each physician, when he has completed his attendance upon a patient, render his bill for such an amount as in his opinion his services have been worth to the patient, taking into consideration not only the amount of time he has given to the case, but also the circumstances of the patient, and his ability to pay. If this plan were generally adopted it would not only materially simplify the physician's bookkeeping, but it would result in a much fairer compensation for his services.—*St. Paul Med. Jour.*

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BEST IDEAS FROM RECENT LITERATURE

Treatment of Stammering.

Speech is an acquired faculty, and stammering an acquired defect; hence the time to cure stammering is before it begins, is the terse way in which Dr. G. Hudson-Maknen (*Jour. A. M. A.*, April 13, 1910) puts this knotty subject. He recognizes three distinct classes of patients: (1) Nervous children with abnormal developments of speech; (2) persons with occasional tendency to stammer and hesitancy of speech; (3) confirmed stammerers.

In patients of the first class the remedy is not far to seek, but also not often easy to apply. The underlying condition may be inherited. Ideas are easily confused and speech made rapid and blustering. And the child's environment is such as to aggravate these unfortunate conditions.

In the second class the remedial measures should be similar to those of the first, plus dispatch, if possible to save the child from the disastrous conditions so generally characteristic of the third class. In the latter the cause may long since have disappeared, and now there seems to be mentally, physically and, also sometimes, morally no health. No other nervous derangement can so tax the skill of the neurologist as this confirmed stammering.

Ideal treatment, according to the author, can be given only at the kindergarten age, in a sort of hospital school, by especially trained teachers—away from mother and father, and brothers and sisters, who, together, unwittingly, of course, are oftentimes responsible for the condition.

Eye and Ear Complications of Hookworm Disease.

In all the vast accumulation of hookworm literature, Dr. L. O. Mauldin points out (*Journal N. C. Med. Assn.*, October, 1910) little or nothing can be found regarding complications from diseases of the eye and ear. As hookworm pathology is more completely developed, he believes, to cover the ultimate destructive metabolism of this parasite it will be found responsible for numerous cases of phlyctenular conjunctivitis, corneal ulcers, herpetic eruptions and anemic disturbances producing noises in the head.

The distinctive reasons for these lesions are malnutrition and impoverished blood. It is a well-known clinical fact that these conditions are common in a degree sufficient to produce the complications named. Then it is a relevant fact that in advanced hookworm disease these organs of special sense are more or less numbed coincidental with the general mental inalertness. Pallor of the optic disc, together with subnormal acuity of vision, are frequently observed. These complicatons respond remarkably to specific thymol treatment of the primary disease.

Medical Treatment of Chronic Interstitial Nephritis.

That this type of nephritis is incurable nobody questions, and no eminently successful practician positively affirms in the hearing of his patient. There is an equally patent fact that may be discussed to the patient's distinct advantage and as an essential part of rational treatment. This is the fact that in no other incurable disease can we do quite so much to increase the patient's comfort and prolong his life as in Bright's disease, particularly when well managed from the earlier stages. Nor dare too much emphasis be placed on the medical treatment. In the most successful plan the non-medical must ever come first and preponderate. This principle is recognized throughout a good paper on the above subject by Dr. George B. Lake, Wolcottville, Ind. (*St. Louis Medical Review*, December, 1910).

The first indication, Dr. Lake points out, is intestinal antisepsis. Replace nature's antiseptic, normal bile. Supplement it with bile acids, or better, their salts, of which sodium glycocholate is the best. Give one grain several times daily. Sulphocarbolate of zinc, one-half grain, or acetozone in grain doses, four or five times a day.

As an indicator of intestinal digestion note effect in stools of ten to twenty grain, daily, doses of bismuth subnitrate or frequently examine the urine for indican. When putrefactive sulphides cease to be formed the stool assumes its normal color.

We know of no drug that favorably influences the kidneys in Bright's disease, but there are several drugs that act unfavorably. These should always be avoided. Such drugs are cantharides, the so-called direct diuretics, spices and condiments generally and alcoholic beverages, all of which stimulate or irritate the secreting structures of the kidneys. With these must be classed as also inhibitive any drug or procedure that increases blood pressure or provokes the heart to do more work. Hence it is wrong to give digitalis in the early stages of this disease.

The main symptom, too high blood pres-

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sure, calls for glonoin, an occasional purge with compound jalap powder, thirty-five grains per dose, diuretic baths, and in the event of alarming symptoms, phlebotomy, which is best performed according to the improved method suggested by Jacobs, who attaches a piece of rubber tubing to the end of a large aspirating needle and, after causing the veins to bulge by applying constriction above the elbow, introduces the needle into one of the veins on the anterior aspect of the elbow with the end pointing distally, the blood being received in a receptacle where its quantity can be readily measured.

Most authors do not recommend the routine use of morphine for dyspnea, though Caille does, but it is an unfailing standby as a last resort. Dr. Lake gives it in combination with hyoscine and cactin, as the relief is more pronounced and certain and the evil after-effects are minimized.

Uremia should be treated on general principles. Elaterium or jalap are to be preferred over croton oil. In comatose states the formed may be employed hypodermically (elaterin, grains 1-60 to 1-10), but in extreme states, where the blood is highly toxic, Sahli's lavage of the blood may be practiced. This is accomplished by withdrawing a certain volume of blood (the amount depending on the conditions of the case) by phlebotomy, and replacing it, in whole or in part, by the intravenous transfusion of warm physiological salt solution. This greatly reduces the toxicity of the blood and relieves undue tension. If there are signs of renal congestion dry cupping over the kidneys may be resorted to. Uremic convulsions are to be controlled by chloroform until a dose of morphine, or better, the hyoscine, morphine, cactin compound, has time to act.

Treatment of Injuries of the Hand With Tincture of Iodine.

Professor Reclu (*Bul. de l'Acad. de Med.*) treats wounds of the hands, whether of severe or slight character, by painting them, as well as the surrounding skin, with tincture of iodine, and then, after evaporation of the alcohol, applying a dry aseptic compress and a layer of cotton and bandage. The dressing is renewed in the evening of the first day, or on the following day, and later at increasing intervals, so that the wound is handled only every three or four days. The iodine application should not be preceded by cleansing, which serves to spread infection and also impairs the effect of the iodine. If the patient's hand has already been washed before the surgeon sees the case, the wound should be thoroughly dried with pledgets of gauze and the iodine then applied. Only freshly prepared tincture of iodine should be employed, at least no older than a week. The result is a rapid cicatrization of the wound, so that the patient is soon enabled to resume work.

The Treatment of Ulcers of the Leg.

In a lengthy excerpt from *La Quinzaine thérapeutique*, the *Practitioner* for August cites different methods of treatment of ulcers of the leg. The preliminary observation is that no fear need be entertained of curing an ulcer of the leg when the patient shows no lesion affecting the kidney, the liver, and other viscera; when, however, the ulcer acts as an emunctory it is necessary to act with caution. Such is the case in respect to patients suffering from heart disease, Bright's disease, and cirrhosis. Galland divides the method of treatment into two categories—palliative and curative. For palliative treatment the limb is well cleansed with soap; poultices of starch and boric acid are applied three times a day, and the ulcers are washed with an abundance of solution of corrosive sublimate. After this an application is made of hydrogen dioxide or zinc oxide or thymol iodide. Compresses of salol gauze may also be applied, the surface of which is covered with boric acid ointment. The following ointment is recommended by Belden:

℞ Olive oil,
Ox gall.....aa ʒss;
Honey of roses.....ʒii;
White wax.....ʒi;
Sugar .....ʒss.
M. Fiat unguentum.

After cleansing the ulcer night and morning with a saturated solution of boric acid, as hot as can be borne, this ointment is then to be spread over it, covered with gauze, and retained in place by a bandage firmly applied.

The author calls attention to the fact that Reclus' ointment must not be overlooked. The formula is as follows:

℞ Antipyrine.....gr. xv;
Boric acid.....gr. x;
Salol.....gr. iii;
Iodoform.....gr. iii;
Carbolic acid.....gr. ss;
Corrosive sublimate.....gr. ss;
Petrolatum..... ʒi
M. fiat unguentum.

After washing the ulcer a layer of ointment is spread over it three times a day. It is then covered with protective, so that the ointment shall not be absorbed by the dressing of gauze, which is kept in place by a muslin bandage.

A Local Anesthetic for Nose and Throat Operations.

At a meeting of the French Ear, Nose, and Throat Association, reported in the *Revue hebdomadaire de laryngologie, d'otologie et de rhinologie* for July 2, 1910, Chavanne communicated a note on the following mixture, which he had found useful as a local anesthetic in operations on the nose and throat:

℞ Carbolic acid.....gr. xxx;
Menthol .....gr. xxx;
Quinine hydrochloride.....gr. xxii;
Adrenalin .....gr. 1/20
M.

City night air is purer than city day air, because there is less dust flying.

It is as important to see that the bed beneath the patient is warm as it is to provide covering.

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Therapeutic Points.

(From The Clinical Reporter.)

As a remedy for the prevention of tetanus after punctured wound Ledum stands on a par with "Antitetanus" serum.

A full dose of ergot, administered as soon as the uterus is empty, will do more in the way of preventing puerperal sepsis than all the antiseptics that can be applied to the parturient tract.

Exposure lowered the bodily resistance and the pneumococcus invaded the system, overcame the organism and caused the patient's death. Is this any different in meaning or result than the old-fashioned statement, "He caught cold, took pneumonia and died?"

Eryngium Aquaticum in doses of one-half grain administered three times daily has repeatedly cured cases of spermatorrhea after all other remedies and measures failed to give permanent relief.

Don't load your "grippe" patients up on "coal-tar" products, depressants and massive doses of quinine, if you would have fewer sequela of pneumonia, middle ear diseases and protracted convalescence.

Aconite is the first aid to the injured; whether this injury be done by the surgeon's knife or a railway wreck, or exposure to the elements. Sometimes it is the only one needed, but to be of any value it must be used early.

Apocynum Cannabinum, the "vegetable trocar," is one of the best remedies at hand in cases of anasarca due to heart or kidney lesions. It is of little value, however, in dropsy due to obstruction of the portal circulation.

The neurasthenic whose condition is due to "wild oats," of which he is reaping a bountiful crop, will be immeasurably benefited by the use of *Avena Sativa*. It is one of the few remedies that is best given in hot water and is also of great value after the excessive use of morphine.

Mastic Dressings for Wounds.

In a note published in the *Journal de pharmacie et de chimie* comment is made by W. V. Oettingen on the advantages of a solution of gum mastic and linseed oil as a dressing for wounds, based on his own observations during the Russo-Japanese War. Considering it dangerous to do so, he never washed out the wounds prior to the application of the varnish, which had the following composition:

℞ Gum mastic.....3v;
Chloroform.....3x;
Linseed oil.....gtt. xx.
Ft. solutio.

This varnish was brushed on the wounded surface and a dressing of absorbent cotton and muslin applied. A fourfold piece of muslin about six inches square is taken and between the folds is placed a layer of absorbent cotton. It is sufficient to apply this dressing on the coating of mastic painted on the wound, and it adheres easily. These dressings are prepared beforehand, and about forty or fifty are sterilized together, taking care to surround them with parchment paper, and closing the packages very carefully when they are removed from the sterilizer.

Shoes and socks that are one or two sizes too large will keep the feet much warmer in severe weather than will those that fit closely.

Ointment of Silver Nitrate.

In a recent issue of the *Monatshefte fur praktische Dermatologie* the following formula is published for ointment of silver nitrate:

℞ Olive oil.....ʒii;
Yellow wax.....ʒi;
Pulverized boric acid.....ʒiiss;
Silver nitrate.....gr. xv.
M.

The Advantages of Sulphur as an Intestinal Antiseptic.

Summarizing the advantages of sulphur as an intestinal antiseptic Wild (*Proceedings of the Royal Society of Medicine*, December, 1910) says:

1. It is almost tasteless and easily administered.
2. It is insoluble in the stomach, and the greater part of it passes along the whole length of the alimentary canal.
3. It does not interfere with the action of any of the digestive secretions.
4. It forms active antiseptic substances in the intestines when their contents become neutral or alkaline. Some of these substances are gaseous and penetrate to all parts of the intestine.
5. It is sufficiently nonpoisonous to be given in effective doses.
6. It has valuable laxative properties which promote an early evacuation of the intestinal contents.
7. It is cheap.

The Sandbag for Comfort.

A sandbag as a warmer is said to be greatly superior to a hot water bottle, which so many people prize so highly. Get some clean, fine sand; dry it thoroughly; make a bag about eight inches square of flannel, fill it with dry sand, sew the opening carefully together, and cover the bag with cotton or linen cloth. This will prevent the sand from sifting out, and also enable any one to heat the bag quickly by placing it in an oven or on top of a stove. The sand holds the heat a long time.—*Health.*

Phenolphthalein Laxative.

A very effective laxative, recommended by Dr. L. F. Cummings, is made by melting one ounce of chocolate and mixing it with fifteen ounces of syrup of acacia, then adding ten grains of salicylic acid and 128 grains of phenolphthalein and mixing thoroughly. Dose: 1 to 3 teaspoonfuls. Each fluid dram contains 1 gr. phenolphthalein.

Vaginal Douches of Lactic Acid.

As the result of numerous investigations it has been shown that lactic acid is present in the normal vagina up to a strength of 0.3 to 0.5 per thousand. Dr. N. Cukor, in the *Klin. Therap. Woch.*, argues from this fact that lactic acid should be used in vaginal douches in place of lysol, bichloride and the rest of the ordinary drugs used, which are all more or less irritating. He believes that healthy women should use these douches daily to replace the lactic acid lost after bathing, etc., and declares that they hasten the return to the normal condition after menstruation. In cases of much discharge from the uterus or cervix their employment is indicated.

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Erosions of the cervix and catarrhal conditions of the genital apparatus are rapidly cured by them, and they can effectually be made use of in the place of all other antiseptic solutions.

Improved Method of Vaccination.

Dr. Sigmund Wasserman recommends the use of the scarifier used by von Pirquet in cutaneous tuberculin tests. He claims equal successes in protection, a method which is quicker, less painful and a resulting pustule as free as possible from undesirable features. This is by no means as trifling a matter as it may seem to those who have had limited experience in vaccination of children, and the medical profession owes Dr. Wasserman a vote of thanks.

A Non-Greasy Antiseptic Ointment.

It has been pointed out by Monteil in the *Bulletin Generale de Therapeutique*, that antipyrine, resorcin, and terpin hydrate, when heated together at a suitable temperature, form a product of an oily consistency, which if triturated with glycerin produces a mixture exactly resembling cold cream in consistency and appearance. A sample made in our laboratory showed a beautiful product, perfectly homogeneous, which rubbed into the skin like an easily absorbed ointment. It has an antiseptic and sedative action, is non-caustic, and can be easily washed off the skin with water. The following is the formula:

Antipyrine	18.8 grams
Resorcin	11.0 grams
Terpin hydrate	18.0 grams

Heat together on an oil-bath to 125 degrees C. (270 degrees F.) and add:

Glycerin (previously warmed) 100.0 grams

and triturate till cold.

Ammonian Clay as a Food.

Major P. M. Sykes has contributed a paper to the members of the Royal Geographical Society in which he describes his sixth journey to Persia and a description of Nishapur and Turshiz.

Edible earth, known as Gil-i-Armeni, or "Ammonian clay," has been found in caves in some hills fifteen miles to the northwest of the sacred lake.—*Pacific Medical Journal.*

Newspaper Pathology.

In an editorial in the *Detroit* (Mich.) *Journal* of December 6, 1910, we come across the following bit of science on infantile paralysis, under the heading, "A Terrifying Scourge from the Old World:"

"Infantile paralysis has been demonstrated to be a micro-organism so minute that it passes easily through the pores of the finest earthenware filter. The organism—or germ, for it unquestionably is a living entity—is scientifically known as the 'poliomyelitis' and, while it is not positively proven, it is believed that the germ has been seen under the most powerful microscopes. In the progress of the disease this minute parasite actually eats away the contents of the spinal cord, which becomes filled with blood. The motor cells become disorganized. The nerve-circuit, if one may so call it, is broken."

Non-Irritating Depilatory.

J. Lutje, in the *Journal de Pharmacie et de Chimie*, says that the irritating action of depilatories containing strontium, calcium or barium sulphides can be overcome by preparing them hot. In making such mixtures 1.5 grams of barium or an equivalent quantity of strontium or calcium sulphide is triturated with 2 grams of starch and 8 grams of water and the mixture heated to boiling, with continuous stirring. Upon cooling, a creamy mixture is obtained, which is reported to be as effective as the preparation prepared cold and it will not hurt the skin.

Hair Curling Preparation.

These preparations may be of a mucilaginous, alkaline or resinous character. An example of each class follows:

1. Gum arabic ..... 1 oz.
   Acid boric ..... ½ oz.
   Sugar ..... 1 oz.
   Rose water ..... 15 oz.

   Mix and dissolve.

Wet the hair with above and roll on papers as usual; let dry, unroll, and form into ringlets.

2. For curling without papers:
   Sodium bicarbonate ..... ½ oz.
   Borax ..... ½ oz.
   Cologne water ..... 2 oz.
   Alcohol ..... 2 oz.
   Tincture cochineal ..... 1 oz.
   Water ..... 24 oz.

   Dissolve the two salts in the water, add the other ingredients, and strain or filter.

3. Tincture benzoin ..... 1½ oz.
   Alcohol, to make ..... 8 oz
   Perfume with oil of rose.

For Dandruff.

Resorcin	4 dr.
Chloral hydrate	6 dr.
Glycerin	10 dr.
Cologne water	8 oz.
Water, q. s. ad	16 oz.

Mix.

Sig. Rub into scalp every morning.

—*The Apothecary.*

To Preserve Rubber Tubing.

Immerse the rubber tubing in a mixture of one part ammonia and two parts water for a time varying from a few minutes to half an hour or an hour, until the original elasticity is regained; or frequently wash the articles in slightly alkaline water. Keeping the goods in air-tight vessels will preserve them for a long time, and so will well-closed tin boxes containing quicklime and ammonium carbonate.

Library Paste.

Ebert's formula:

Corn starch	2 oz.
Gelatin	¾ oz.
Water	16 oz.
Oil of cloves	16 dps.

Incorporate the starch with the water, add the gelatin, and heat the whole on a water bath until a uniform jelly-like compound results. When nearly cold, stir in the oil.

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BOOK REVIEWS

The Sexual Disabilities of Man and Their Treatment. Arthur Cooper, Consulting Surgeon, Westminster Dispensary. Cloth. $2.00 net. Paul B. Hoeber, New York City.

Notwithstanding that this book has apparently met with some favorable comments among reviewers, we are sorry that we cannot speak in praise of it. We have failed to find a single idea in it that is new, and the old ideas are expressed in such a weak and indefinite manner as not to be in any way improved.

Bed-Chamber Secrets: Or the Revelations of a Doctor. By a retired physician, surgeon and specialist. Cloth. Price, $1.00. Published by A. J. Whitworth, M.D., McComb, Miss.

We do not see any value in this book. The author devotes 32 pages to setting forth, in rather a vague way, the dangers of allowing male osteopaths to administer osteopathic treatment to girls and women in the operating room, behind locked doors. In this contention he is correct, and it is but voicing the perfectly proper objections to the work of the masseur under similar circumstances. His grammar and punctuation are very crude.

He devotes the remaining 160 pages to giving his ideas of the treatment of various diseases, with prescriptions. Inadvertently an advertisement of this book was accepted for our February issue. When the book arrived the February issue was out, and it was too late to withdraw it. We do not wish to advertise it further because we do not think the purchaser will realize a dollar's worth from it.

Case Histories in Pediatrics. John Lovett Morse, M.D., Assistant Professor of Pediatrics, Harvard Medical School. Cloth. 314 pages. Illustrated. Price, $3.00. W. H. Leonard, Boston, Mass.

Physicians are not always able to drop their work and go to a distant city to take a post-graduate course in any special line of work. This book in its scope resembles a post-graduate course. It consists of the clinical histories of 100 actual cases selected to illustrate the diagnosis, prognosis and treatment of the most important diseases of infancy and childhood. The following subjects are taken up by divisions, each subject illustrated with a number of cases: Diseases of the New-Born, Diseases of the Gastro-Enteric Tract, Diseases of Nutrition, Specific Infectious Diseases, Diseases of the Nose, Throat, Ears and Larynx, Diseases of the Bronchi, Lungs and Pleurae, Diseases of the Heart and Pericardium, Diseases of the Liver, Diseases of the Kidney and Bladder, Diseases of the Blood, Diseases of the Nervous System, and Unclassified Diseases.

Each history is presented under the captions, History, Physical Examination, Diagnosis, Prognosis and Treatment.

Much attention is given to diagnosis, which is thoroughly discussed by naming diagnoses which might with some reason be made, and eliminating each in turn by careful reference to clinical signs and symptoms, the final diagnosis being that which cannot be set aside and which all symptoms support.

Treatment has received most attention. Both diagnosis and treatment have in each case been verified by subsequent history and are hence without error.

The book is original and thorough, and the most interesting as well as the most valuable in this department for the general practitioner.

The Blues: Causes and Cure. By Albert Abrams, M.D. (Heidelberg), F.R.M.S. Cloth, 295 pages. 35 illustrations. E. B. Treat & Co., New York, N. Y. Price, $1.50.

This is the fourth edition of this most interesting work, which is a sufficient indication of the demand for such a book in the profession. The author styles the blues as splanchnic neurasthenia. By diagrams, colored illustrations and arguments he shows that congestion of the abdominal organs is the cause of many of the cases of physical and psychic depression, and that by suitable treatment this can be quickly relieved. It is a book worthy of careful study by the family physician.

Dyspnoea and Cyanosis. Prof. Edmund Von Neusser, M.D., Professor of the Second Medical Clinic, Vienna. Translated by Andrew MacFarlane, M.D., Professor Medical Jurisprudence and Physical Diagnosis, Albany Medical College. 203 pages. Cloth. E. B. Treat & Co., New York, N. Y.

The author takes up the question of difficulty of breathing and insufficient aeration of the blood from the viewpoint of the many causes which may induce these conditions. Part I considers the subject under the various diseases of the respiratory tract, including the nose, throat, bronchial tubes and lungs in their various diseased conditions. Part II considers the subject under disorders of the circulation through diseases of the heart and blood vessels, including the effects of poisons and general systemic conditions. This is a book which every practitioner should thoroughly study.

Lessons on the Eye. Frank L. Henderson, M.D. Cloth, 238 pages. Price, $1.50. P. Blakiston's Son & Co., Philadelphia, Pa.

It is courageous for an author to state particularly that his book is intended for the undergraduate. From our careful persual of this book we believe that many physicians in practice would

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profit greatly by its careful study. Sometimes a simple and plain presentation of a subject aids greatly in preparing one for a more advanced study of that subject.

Truths: Talks With a Boy Concerning Himself. By E. B. Lowry, M.D. Neatly bound in cloth. 16mo. Price, 50 cents, postage 5 cents. Forbes & Co., 325 Dearborn street, Chicago.

A book containing the simple truths of life development and sex which should be given to every boy approaching manhood. This book adequately and delicately presents these truths in language intelligible to boys from ten to fourteen years of age. Parents, teachers and physicians will find it a needed and helpful book of inestimable value.

Internal Secretions. Isaac Ott, M.D., Professor of Physiology in the Medico-Chirurgical College, Philadelphia, Pa. Heavy paper, 133 pages. Price, $1.00. E. D. Vogel, Easton, Pa.

The attention of the profession is now being attracted towards the study of the ductless glands and the influence of their secretions upon the physiologic processes of the body and consequent resistance to disease. This is a very important contribution to the subject. Dealing with the three following subjects, it is worth a careful study: The Parathyroids, The Pituitary and The Correlation of Glands with an Internal Secretion.

The Practice of Osteopathy. Charles H. Murray, A.B., B.D., D.O. Cloth, 338 pages. 108 half-tone engravings. Price, $2.50. Elgin Osteopathic Pub. Co., Elgin, Ill.

We have often advised our readers to take the pains to acquaint themselves with the principles and methods of osteopathy—as they should of every mode of treating disease. This is important for two reasons: first, by knowing the subject thoroughly you are able to meet it in your practice, to intelligently discuss it and to show whatever defects you may find in it; second, in order that you may be able to adapt whatever there is good in it to your practice. Heretofore we have been unable to find a suitable book to recommend for this purpose, as they were, most of them, burdened with impractical thories, expressed in involved and obscure language. This book is brief, clear and plain in its language and also contains illustrations that show plainly what is described in the text. In recommending physicians to purchase this book we do not mean that all of the claims made in the treatment of different diseases will be verified. But we do mean that whatever of merit there is in osteopathy you can obtain by reading this book. We earnestly recommend that this book be added to the purchases you make for this year.

Practical Pointers for Progressive Physicians, with chapters on Hookworm and Pellagra. J. H. McCurry, M.D., Grubbs, Ark. Cloth, 199 pages. Price, $1.00. Published by the author.

This author has evidently been a close reader of medical journals and has selected the practical points which impressed him as of most value and has gathered them up in this book. In addition to the practical points, each alternate page is blank for the reader to write in or paste in his own selections.

In reviewing this author's book upon Malaria, in our last issue, we inadvertently gave the wrong price. It should be $1.50.

The Social Evil: An Appeal to the Boy. By W. H. Peters, M.D., Providence, R. I. Paper. 10 cents.

This is a straightforward and manly appeal.

The Parent's Duty to Instruct His Son in Sexual Hygiene. A Reprint. By the same author.

Memoranda on Poisons. Thomas Hawkes Tanner, M.D. Revised by Henry Leffman, A.M., M.D. Cloth, 167 pages. Price, 75 cents. P. Blakiston's Son & Co., Philadelphia, Pa.

This is a small pocket edition which enables the physician to have it with him at all times for use in emergency. Any one who is acquainted with Dr. Leffmann will readily understand that this work must be scientifically correct. We commend it heartily to the use of the profession.

The Errors of Mind Healing. Reinhold Willman, M.D. Cloth, 179 pages. The Advocate Publishing Company, St. Joseph, Mo.

The author has taken up this work with a view of comparing the miracles of Christ and his disciples with the claims of modern Christian Scientists and others who claim to heal by mental and spiritual means. He is evidently a deeply religious man and supports the claims of the Bible. He shows up very clearly the errors promulgated by the various so-called healers and healing cults, the Eddyites, Zionites, Spiritualists, Emmanuelites and others. He shows the absurdity of the public trusting their health to such persons.

We recommend our readers to secure the following pamphlets, as being of general interest to physicians:

How to Prepare a Paper for Publication. 20 pages. C. Bowyer Vaux. Williams & Wilkins Company, Baltimore, Md.

Analytical Notes. 88 pages. Evans Sons, Leacher & Webb, Ltd., 92 William street, New York, N. Y.

Some Scientific Conclusions Concerning the Alcoholic Problem and its Practical Relations to Life. 179 pages. Government Printing Office, Washington, D. C.

The Action of Sodium Benzoate and Benzoic Acid on the Human Organism. 18 pages. C. A. Herter, Washington, D. C.

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THE

Medical Council

A MONTHLY JOURNAL FOR THE PHYSICIAN AND SURGEON.

"WE FIND WISDOM AND STRENGTH IN COUNCIL."

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Fractures in the Hands of General Practitioners.

It is becoming increasingly difficult for the general practitioner to satisfactorily handle his fracture cases. The X-ray operator has shown that neither surgeon specialists nor the run of practitioners get nearly so accurate an approximation of the fragments as we fondly imagined we did before he revealed the real state of affairs. Recent works upon surgery have extended the length of time required for union, more especially as regards the long bones, and the assertion is made that many bad results are due to a too early use of the parts. Exclusively rigid dressings are going out and open methods of treatment are being advocated for some fractures. This is all in the line of advance and is to be commended. We have recently seen a series of fracture cases treated by the open methods developed by the Mayos, and not only were the results excellent, but the patients were able to be discharged from the hospital much earlier than is the case when other procedures are adopted.

As there is a general advance in medical science and the doctor must read much to keep abreast, may we emphasize the point that in surgical diagnosis and treatment the advances have been so marked that any general practitioner who essays to treat his fracture cases cannot go by the older books with which he is familiar. Probably nothing sticks so long in mind as do pictures and the old classical illustrations as to the way to put up assorted fractures influence us long after the drawings cease to depict modern practice. Recently we had a comminuted fracture of the clavicle and it was wired as firmly as the exigencies of the case permitted, but nearly every doctor who saw the man upon the street was amazed to see the hand upon the involved side was not elevated to the opposite shoulder, a bad position for this case.

The too-freely expressed criticism of some surgeons deter many physicians from treating their fracture cases. Where a local surgeon is so inclined, it is usually the case that he means no unkindness, but is only thoughtless, and bringing the matter to his attention corrects the handicap under which the general practitioner labors. There is no scientific reason why any capable man should not treat his own fracture cases, provided he goes to the trouble to inform himself and is careful. Nature is most kind in uniting fractures and the general results are favorable under *any* reasonable line of treatment.

There is so much difference in opinion among surgeon specialists as to the open methods and some other procedures advocated that the general practitioner need not unduly fear criticism of his conduct of a

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case in which he does not use these means. Let him simply be firm, have the courage of his convictions and carefully watch his cases and he will get good results with most cases. No surgeon gets perfect results universally, and many a fracture is better treated by the family doctor who follows up the case than it is by the specialist who adjusts it and leaves the after care to an assistant.

We should not be scared out of all surgery because it has become a specialty, nor should we send to a hospital the cases not demanding hospital care just because we fear the criticism of other doctors. Every physician should have enough surgical work to keep his hand in. None of us know when an emergency may confront us and in which we may be obliged to do a major operation, hence we should not side-step all of the surgery coming to us.

Discrediting Salvarsan.

From our observation, there are many physicians making a too timid use of this admittedly useful drug, take what view we may as to its specific curative influence upon syphilis. These physicians either reduce the dose, owing to their fear of the arsenic content, or they hesitate to use it intravenously. We believe they are in error. Any one who reads the theory of the distinguished discoverer of the method can readily see that a reduced dose will utterly fail to produce the desired effects. From what observation we have been enabled to make, we believe in the intravenous method, *provided* the physician so administering the drug is equipped with the essential appliances and observes the proper care to preserve the asepsis of the solution and the instruments employed.

Before salvarsan was obtainable by the profession at large we observed in San Francisco newspapers advertisements of a certain class of physicians claiming to administer the agent and promising the impossible from its effects. Since it is to be had commercially, from all over the country come similar advertisements.

But the most outrageous advertisement we have seen emanates from Philadelphia, as follows:

"606" OR "SALVARSAN."

"Ehrlich's skillfully advertised '606' is now on the market under the name 'Salvarsan.' We procured some of it as soon as it was offered and have triturated same, and also made potencies of it. 'Salvarsan' is a golden-yellow powder, in hermetically sealed glass tubes, that sell at a price close to that of raw gold. We are offering the 6x trituration at regular catalogue prices; also the dilutions to the 30th centesimal."

Any intelligent homeopathic physician can see the cruel fallacies involved in this exploitation of the drug, and we trust to the good sense of that branch of the profession to make no estimates of the value of the method from such attenuated doses of an agent not at all effective under the "law of similars" and that is so promptly decomposed by exposure to the air.

We remember how Koch's tuberculin was discredited by the early unscientific use made of it by half-informed physicians. Wright's opsono-therapy is suffering the same fate at the hands of many, and we are most anxious that scientific therapy receive no more wounds in the house of its friends.

Before *any* physician employs salvarsan it is positively necessary that he study the theory involved, and he *should see* some capable clinician administer the agent. This latter is not imperative, but when it is not possible a most thorough study of the technic is essential. Let us not be guilty of bringing discredit upon this method by inadequate, timid or unscientific employment of the drug.

Previous to making the incision in an operation, paint the skin over the part with tincture of iodine. It is an efficient and convenient method of sterilization.

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Defalcifying Treatment of Angina Pectoris.

In a post-graduate lecture on the uses and abuses of calcium, before the Royal Infirmary of Liverpool, Sir James Barr points out the indications and use of calcium in the treatment of angina pectoris, substantially as follows:

In true angina, or the spasmodic type, there is an excess of lime in the heart muscle and also, to a less extent, in the blood.

The speaker cited a case recently seen in consultation in a woman who had suffered severely for six months, and at the time of the consultation was having at least a dozen attacks per each twenty-four hours. All the usual remedies had been tried with little relief, and the prognosis was considered very grave.

The patient was 66 years old, a thick set, well nourished woman, with a pale face, an anxious expression and an intense feeling of oppression in the cardiac region. The heart area was large and markedly tender. The heart action was regular, except for an occasional intermission. The sounds were clear, except for a long rough systolic murmur over the aorta and a low pitched systolic murmur in the mitral and tricuspid areas.

Examination showed the calcium of the blood only slightly above Bell's unit. The treatment, to be continued until the tissues are well decalcified, consisted of half a dram of dilute phosphoric acid every four hours and plenty of acid fruit. The local hard water was interdicted. Small doses of morphine and atropine, also nitroglycerine, were continued as palliatives while pains continued.

The pains rapidly disappeared. The patient was kept in bed for a month, then the acid was displaced by strychnia and strophanthus. Recovery was complete.

A New Treatment for the Opium Habit.

There has long been used throughout the Malay Peninsula a native plant called Combretum Sundiacum as a cure or antidote for opium habituation. Some rather fanciful claims have been made for the plant, but there is no doubt of the fact that it has established for itself quite a reputation.

The plant is a succulent climber and the dried leaves and stems are to be obtained in the American drug market. We have not been able to obtain definite data concerning the physiologic action of the drug, and, indeed, the matter presents difficulty since no active principle has been isolated. We are informed that Prof. H. C. Wood is making some studies of the plant and we have no doubt he will arrive at some definite conclusion.

As used at the present time, equal parts of the infusion of the plant and tr. opium are supplied to the patient and the proportion of the cure is increased as that of the opium is diminished. We do not know from observation anything about the effectiveness of the method, nor can we state the safe maximum dose of the infusion.

Disinfection by Ironing.

The effect upon the germs of communicable diseases, on different fabrics, of the process of laundry ironing, was scientifically studied by K. Svechla (*Pharm. Zentralh.*, 1910, p. 160). The author touched linen, wool and cotton goods with infected material, then after moistening slightly passed over the fabric a single time with a hot flatiron. This was found sufficient for sterilization, particularly in the thinnest fabrics. The effect is superficial, so would better be made thorough by passing the iron over several times, especially in disinfecting a thick fabric.

But inasmuch as bacteria brought in contact with thick fabrics do not penetrate into them, but remain on the surface, they naturally become exposed to the action of the hot iron.

This mode of disinfection is practical in the case of linen garments put on before visiting infected patients, if these garments may be moistened and ironed each time after such use.

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Checks and Prescriptions.

We have had occasion to inspect two classes of writings by the same class of men, and, while this is not a literary review, we have noted that the doctor who very carefully writes a check is just as apt to carelessly write a prescription. Bankers do not complain of the illegibility of physicians' checks, but druggists have much to say of the prescriptions concerning which they are in doubt as to the intent of the writers.

In this matter there are two classes of pharmacists. The first class refuse to fill an illegible prescription, since the law makes them equally responsible with the physician should an error occur, and they know that the jury would want to see the original prescription. When the prescription is not readable the jury would take the ground that the druggist had no right to fill it. The second class of druggists use their best judgment and put up what they think is about right. We saw a recent instance of this. The prescription was for an external antiseptic preparation, and no one could tell whether the writer meant one ounce or one dram of the drug. The druggist used an ounce with immediately irritating effect.

Really we can see no excuse for an illegible prescription and, were the matter to come before a court, the doctor could offer none. It is not fair to the patient, to the druggist or to ourselves. None of us know what will become of our prescriptions. While the nearest druggist may know the peculiarities of our handwriting, the prescription may be filled in another city and the dispensing clerk make any one of many possible mistakes. Let us write our prescriptions as carefully as we write checks. Common justice demands that we do so.

It is interesting to observe how many of the advertising quacks in "diseases of men" have seized with avidity upon "606" and are exploiting its efficacy with gross exaggerations in their advertisements in the daily press in all our cities. Either they do not use it, and hence are lying, or there will be a goodly crop of disastrous accidents to record.

It is important that any subscriber who changes his location should at once notify us of his change, giving his old address also, so as not to miss any numbers of THE COUNCIL.

The Bulwarks of Honesty and Patriotism.

The time was when we depended upon the daily and weekly newspapers to keep the people informed in regard to the truth of what was going on in municipal, state and national affairs and in business development. The editors were their own publishers and they took an honest interest in the true welfare of the people—even going so far as to defend on the "field of honor" the views which they fearlessly expressed.

The development of the modern newspaper into a vast institution, requiring immense capital to start it and keep it afloat, has changed all that. The great newspaper now has a capitalist as its responsible head, who hires the editorial writers and dictates what they shall write, also dictating what lines of news shall be suppressed or distorted to a false meaning and what shall be given undue prominence. Those who are familiar with the newspaper situation as it exists to-day know that there is very little that is honest, reliable or genuine about it.

As nature tries to fill any important vacancy, there has arisen a class of enterprising, independent and patriotic magazines to perform the function formerly belonging to the newspaper—to expose fraud in business and in politics and to foster the higher and nobler ideals of patriotism and of honor and integrity among men.

Those who have been most hurt by their fearless exposés and righteous denunciation have called these magazines "muckrakers," but their onward progress can never be stopped by mere epithets. Hence we are glad to see that such magazines as the *American, Hampton's, Pearson's, Success, Collier's, World's Work, McClure's,* and *Everybody's* are rapidly extending their subscription lists and their newsstand sales. There is nothing so cheap in this age as good reading matter—and there could be nothing so wasteful as poor reading matter. We advise our readers to subscribe to as many of the above named magazines as they can afford. We believe that the hope of the country is now in the independent and the intelligent middle classes of the people.

He Saves the Boys.

Mr. Henry George gathers out of the slums of New York five hundred boys and gives them training in the George Junior Republic. Of these five hundred, all of whom found it easy to enter the broad way that leads to destruction, only ten have gone back to a criminal life.

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Original Articles

The following articles have been written exclusively to the editor and readers of this journal. Other journals republishing any of these articles will, as a matter of professional courtesy, kindly give credit as follows:—*Medical Council*, Philadelphia.

We are not responsible for the views expressed by contributors.

Sentences, like sunbeams, burn deepest when most condensed.

The Reiteration of Some Important Points in Practical Obstetrics.*

By J. O. Arnold, M.D.,
Associate Professor of Obstetrics, in Temple University Medical School; Associate Obstetrician to Samaritan Hospital, Philadelphia.

My paper is more in the nature of a report of some experiences with certain obstetric procedures that have not as yet been generally adopted, than it is the formal discussion of the various subjects in question. My first point is with regard to what I consider the simplest, easiest and most efficient method of checking the secretion of the lactating breast. I should certainly hesitate to even briefly speak of this subject, were it not that there still prevails among text-book authorities, as well as in general practice, such a great variety of remedies and such a wide diversity of opinion as to the best methods to pursue, when, for any reason, it is desirable to "dry up the milk." I recently looked this matter up in twelve different modern texts on obstetrics, and found, to my surprise, that nine out of the twelve recommended a more or less extensive line of drug treatment for this purpose, including potassium iodid, camphor, chloral, ergot, atropine, or belladonna in some form, either internally or externally or both, lead water and laudanum, all kinds of poultices, electricity, etc., with saline purging, restriction of diet, and tight bandaging. What was still more surprising, over half of these authorities still advise the use of massage and the breast pump for the purpose of stopping the flow of milk. Drugging is bad enough, but it has at least this much in its favor: it will not prolong lactation, while massage and pumping undoubtedly will.

With all this from the leaders in the profession it is little wonder that each family doctor has his own pet method, or is obliged to vie with the laity in the number, if not the absurdity, of the remedies recommended. And this, too, in spite of the fact that the one simple and invariably successful method was announced by various authorities years ago. When I was a student in the Jefferson Medical College the venerable Professor Parvin taught, and had been teaching for years, that to dry up the milk "all local treatment is unnecessary, for" (to quote his own words) "the secretion stops if the milk is not required. The great law of political economy is as true here as in the department of manufactures—if there is no demand there will be no supply."

Dr. Parvin therefore advised that the amount of liquids be restricted, a daily saline purge be given and the breasts be snugly bandaged and let alone. As one of his pupils, this is the method I pursued with generally good results, if not always with pleasure and comfort to my patients—until about four years ago, when Dr. H. J. Storrs, of Johns Hopkins, published the results of several years of experiments on checking lactation by different methods, as tried out in the obstetric service of Dr. Williams, of that institution. These experiments proved conclusively that the most efficient, simplest and best method of all was that of letting the breasts absolutely alone. It was found by Dr. Storrs that not only were all drugs, either internally or externally, unnecessary and useless, but that restricting the diet, purging with salines, and bandaging the breasts uncomfortably tight, were also entirely superfluous. The one essential thing was to see that the breasts were let alone, that they were kept as nearly absolutely free from any kind of stimulation as it was possible to do.

Nearly 200 cases of all types and kinds were reported in Dr. Storr's paper as having been treated by this most natural method, without a single mammary abscess or the failure in a single case to have the engorgement of the breast subside, and the secretion of the milk cease before the end of a week.

Upon reading this article I at once modified my own practice to conform to this plan, by omitting the often very uncomfortable tight binder, by entirely disregarding the items of diet and purgation, and by instructing my patients and their attendants that the breasts were to be let absolutely alone. With Dr. Applegate's permission, I adopted this method whenever opportunity presented, in the maternity wards of the Samaritan Hospital; and for the past four years I have used no other method in all

*Read before the North Branch of the Philadelphia County Medical Society January 17, 1911.

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cases that have come under my treatment in private practice.

The results have been so uniformly successful and so highly satisfactory, both to myself and my patients, that I have not the slightest hesitancy in urging the more general adoption of this simple method. In fact, I can see no excuse for either internal or local treatment of any kind, unless it be among the very ignorant, where, at times, a simple placebo may possibly be required.

A Simple Method of Inducing Labor.

My second point is concerning the induction of labor. I wish very briefly to call attention (1) to the advisability of inducing labor much more frequently than is usually done, and (2) to a little practical device that I have found of great service whenever the induction of labor has been undertaken.

From a series of observations along this line in the last two years I am persuaded that there is a comparatively large number of cases of various kinds—larger, perhaps, than many of us have hitherto recognized—in which the careful and successful induction of labor means a great deal in the conservation of energy both to the doctor and the patient. Of course, we all know how important it is at times to induce labor prematurely where there is a marked degree of disproportion between mother and child, or where for any cause there is reason to believe that the continuation of pregnancy to term, or the process of labor at term, will be attended with serious danger to mother or child. But there is another and entirely different phase of the subject that has appealed to me as worthy of some attention.

Perfectly normal cases that have reached term, or at least are supposed to have reached term, and have not yet gone into labor, may often save from one to two or three weeks of anxious waiting, worry, and nurse hire, even actual suffering and general wearing out of energies that will be so much needed later on, by having labor induced and pregnancy terminated before all these days or weeks of overtime suffering are sustained. Not only this, but one of the chief causes of a widely prevalent dislike for obstetric work among doctors, namely, the untimely hours and great uncertainty as to date of labor, can thus, in some cases at least, be removed; for when once one has practiced and perfected a given method of bringing on labor he can almost set the day and hour of delivery to suit the convenience of the parties interested, and thus save much for both physician and patient. Lack of time forbids the enumeration of quite a number of circumstances and conditions in which the induction of labor at a designated date can be made of great value to the patient or the doctor, or to both. I am not at all unmindful of the criticisms this suggestion will provoke, but I shall at present attempt no defense other than to say that I have tried out the idea on a sufficiently large number of cases to satisfy myself of its entire practicability, and to justify the belief that, with proper methods and attention to cleanliness, the general practitioner may easily and safely induce labor, whenever, for the foregoing or other good reasons, he believes it to be indicated.

Now a few words as to the method I have found most efficient: I am sorry I cannot recall where or by whom I first saw the suggestion for the use of a fenestrated rectal tube, instead of some type of catheter or solid bougie, as ordinarily used in what is known as the Krause method. A medium-sized rectal tube is cut to about ten or twelve inches in length, then perforated with circular openings about an eighth of an inch in diameter at intervals of not more than an inch, on all sides. This fenestrated tube is introduced through the cervix or os into the uterus, by means of a probe, or the ordinary uterine sound, which is passed through one of the perforations near the end of the tube and used as a guide to carry the tube through the cervix; but this guide is not passed beyond the internal os. The sound is then withdrawn and inserted in another hole, passing the tube a notch further, and so on until the desired amount of the tube is thus fed into the uterus, inch by inch. A piece of moist sterile gauze is then packed in the vagina to hold the tube in place and after an hour or so the patient is allowed to be up and about.

My experience has been that, in a large majority of the cases, labor comes on within five or six hours. Occasionally I have seen labor well established at the end of an hour after this procedure, and I recall at least two cases, where, for some reason or other, there was no response in twenty-four hours, and I was obliged to reinsert the tube, this time to be followed by prompt and satisfactory results.

A few words further as to technique. It must not be supposed that a procedure

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so fraught with the possibilities of harm as is the induction of labor is to be undertaken lightly or carelessly. Having decided that there are good and sufficient reasons for inducing labor, the patient is carefully prepared by vaginal douching and external cleansing, and is placed across the bed with the hips well to the edge, and legs supported, and draped in a clean sheet. The physician prepares himself as carefully as for any other obstetric operation, using, of course, sterile gloves and gown.

It has been my practice, in most cases, to use a large size bivalve speculum, exposing to view the cervix, which is grasped and gently held by a volsellum forceps, while the tube is introduced by sight as described above, thus reducing to a minimum the possibilties of infection.

Some of the advantages of this method are: (1) The simple, easy manner of introducing the tube; (2) its reliability and prompt effectiveness in exciting uterine contractions—owing to the comparatively large size of the tube, and (3) the very small danger of rupturing the membranes, or producing other traumatism—owing to the fact that the tube is blunt and smoothly rounded at the end, and quite flexible, because of its numerous perforations. Of course, harm *could* be done, but certainly not as easily as with a catheter and stilet, or a solid bougie. I have been fortunate enough so far to have had no rupture of the membranes, or other undesirable results from the use of this method.

No anesthetic is necessary, except, perhaps, in extremely nervous individuals, in whom even a vaginal examination is difficult without an anesthetic.

Of course, when the pains have become sufficiently frequent and strong the tube is removed and labor is allowed to proceed as under normal conditions.

Easy Method of Rotating the Occipito-Posterior Vertex.

My third and last point is concerning occipito-posterior positions of the vertex. There are few of the abnormalities and complications of labor that produce so much delay and suffering and that are attended with so many possibilities of harm to both mother and child, or that give the physician so much difficulty to terminate successfully, as those cases of vertex presentation in which the occiput fails to rotate anteriorly. The number of such cases occurring in general practice is difficult to estimate. All authorities practically agree that fully 20 per cent. of vertex presentations engage as occiput-posteriors. Of course, the large majority of these rotate anteriorly in the course of labor and give no more trouble than that caused by the prolonged efforts necessary to produce the greater degree of rotation. But what of those that *fail* of anterior rotation? It is this group of cases, variously estimated at from 2 to 4 out of every 20 occiput-posteriors, that gives the doctor so much trouble, and that is fraught with such serious danger to both mother and child. I need scarcely refer to some of the elements of danger in these cases. There is bound to be greatly prolonged labor, with its peculiarly exhausting effects upon the mother, and its increased dangers of infection; also greatly increased liability to extensive lacerations—usually necessitating secondary repair operations; and a fetal mortality rated as high as 10 per cent.

It is quite evident, therefore, that we have here to deal with a class of cases well worthy of the most thoughtful attention of the obstetrician, and that, if he can devise and put in practice an efficient and satisfactory method of handling the 3 or 4 cases of persistent occipito-posteriors that occur in every 100 confinements, he is doing no mean service in the saving of life and the prevention of maternal invalidism. But it is not only of these 3 per cent. or 4 per cent. of persistent occipito-posteriors that I wish to speak, for I believe it to be a conservative statement to say that fully 10 per cent. more of these 20 cases, that finally *do* rotate anteriorly, do so only after such long and intensely severe labors that we are justified, from a consideration of both mother and child, in interfering and terminating labor, especially if we have a method that is reasonably safe and practical.

From this reasoning, therefore, it will appear that there are probably 5 or 6 cases out of every 100 vertex presentations in which the occiput either will not rotate anteriorly at all, or, if let alone, will do so at too great a cost to the welfare of mother and child.

What are the etiologic factors in these cases, what can be done to prevent their occurrence, and how they are to be recognized when they do occur, are all very interesting questions that, for want of time, must be passed over at present. Of course, the question of diagnosis of exact position is a most important one—often a difficult

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one—and one in which there are, I am convinced, many mistakes and many serious results because of these mistakes.

It goes without saying that there can be no intelligent method of handling such cases unless there is absolute certainty as to diagnosis of position. Not every one doing obstetric work takes the trouble to familiarize himself with accurate and reliable methods of diagnosis, and much of our obstetric grief, especially in occipito-posteriors, is the result of this failure.

But having made the diagnosis and recognizing that here is one of the five or six cases above referred to where interference is necessary, what shall be done? Our text-book authorities give us at least four different methods of terminating labor in such cases: First, apply forceps and deliver in the posterior position, and very probably get a complete laceration of the perineum; second, do podalic version and take the chances of seriously injuring the mother or killing the child in delivering the after-coming head; third, apply forceps and, at the risk of considerable traumatism to both mother and child, rotate the head to a more favorable position, then await natural delivery or reapply the instruments and deliver; and, fourth, use some method of manual rotation—which has usually meant the pushing of the head up out of the pelvic cavity and thus considerably disturbing the child's normal attitude of flexion.

There are scarcely any two authorities that agree as to which one of these methods should be used. For instance, one of the best-known obstetric writers states that the use of the forceps as a rotator is the easiest and surest method of handling such cases, while two or three other authorities emphatically forbid the use of forceps for this purpose at all. One man believes that if the head is not firmly fixed in the pelvis, podalic version should always be done, while others of equal note very cordially condemn podalic version for any of these cases. And so it goes; each one of these methods has its limitations and faults which have been duly pointed out by the man who uses some other method, and it is scarcely likely that any method will be found that will meet with general approval.

I wish to briefly describe a method of bimanual rotation that I have used in this class of cases for the past four years, and which I believe has several points of superiority over any other method with which I am familiar—a method that I have come to look upon as entirely satisfactory. This method, so far as I know, was first described by Dr. William D. Porter, of Cincinnati, about ten years ago, but was not published until about four years ago, when Dr. Porter read a paper on the subject at the Atlantic City Meeting of the A. M. A., in which he reported having used the method I am about to describe, in more than 50 cases with entire success.

This method appealed to me as being so simple and practical (especially after Dr. Porter had more fully explained it to me) that I determined to try it at my earliest opportunity. I did not have long to wait, and my first trial was attended with very happy results, and in the nearly four years since I have used this method—slightly modified by the addition of one maneuver not mentioned by Dr. Porter—in some 25 or 30 cases with equally satisfactory results (except in 2 or 3 instances in my earlier experience) until now I have come to look upon a case of persistent occipito-posterior with no more fear as to its successful termination than I would have in any ordinary forceps delivery. In fact, I rather enjoy being called to such a case now, for I feel that I will be able to promptly convert a most tiresome and difficult case into a comparatively easy one, and thus bring early relief to both doctor and patient. I assure you I did not always contemplate such cases with the same degree of pleasure! Any one who has had a few cases of complete laceration of the perineum from attempting to deliver with the occiput-posterior, or whose fetal mortality in such cases, by whatever method of delivery, has been distressingly high, will gladly welcome a procedure that will, perhaps, in the majority of cases, enable him to have no lacerations at all and certainly a greatly reduced fetal mortality. Such a procedure, in my opinion, is that devised by Dr. Porter, with the slight but important modification which my experience with the method has led me to make.

In describing this procedure (which description, in part, at least, is *verbatim* as Dr. Porter gave it) we shall, of course, assume that the cervix is fully dilated, that the patient has been anesthetized and placed in the proper position for forceps application, and that the diagnosis of occipito-posterior position has been verified, if necessary, by touching the child's ear. We shall also take it for granted that the position was originally right occipito-posterior and that therefore the body of the child is toward

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the mother's right. The percentage of cases with the child occupying a similar position on the left is so small that, for the present, the former only will be considered, although the method of handling the latter is precisely the same, except that the position of the operator's hands is just reversed.

The obstetrician, standing or sitting directly in front of the patient, rotates his left hand sharply outward until the ulnar edge is pointing upward and the thumb downward and towards the mother's right. In this attitude the hand is inserted in the vagina with the palmar surface of the fingers applied to the right side of the occiput. If the head be high it will be necessary to insert the whole hand; if low, only the half

Fig. 1.—Manikin demonstration showing position of hands (of obstetrician *and assistant*) at beginning of rotation of persistent occipito-posterior, head low in pelvis.

Note that the obstetrician is standing to one side so as not to obstruct the view, whereas in actual practice he stands or sits directly in front of the patient.

hand need be introduced. Contrary to other methods of manual rotation, no attempt is made to grasp or hold the head with this left hand. Such an attempt would only tend to force the head out of the pelvis, or disturb its normal attitude of flexion, both of which occurrences are especially to be avoided. While it would often be very difficult to find room to grasp the head securely between the thumb and fingers, there is always plenty of room in the left side of the pelvis to insert the inverted hand against the right side of the child's head without danger of pushing the head up or diminishing flexion. While placing the left hand as here indicated, the fingers of the right hand are pressed firmly on the abdominal wall above the pelvis until they come in contact with the left frontal region of the child's head. When properly placed the two hands thus hold the head firmly in their grasp, and rotation is accomplished by the combined action of the two hands—the internal hand as it attempts to untwist, making pressure directly against the occiput and crowding it firmly against the right side of the pelvis, thus making room in the left side for the brow, which is caused to rotate in that direction by the pressure downward and toward the left of the external hand on the left fronto-temporal region of the child's head.

My experience quite corroborates the statements of Dr. Porter to the effect that the two hands thus acting—the internal hand with its strong rotary force and the external hand utilizing an effective leverage—are capable of exerting a tremendous rotating power if necessary, but that rotation is usually surprisingly easy. I have found also that the depth of the head in the pelvis and the firmness with which it is sometimes impacted there are no contraindications for the use of this method, notwithstanding a prevalent idea to the contrary among those who have not tried it. A pelvis that will permit the head to engage, descend and rotate until the occiput rests in the hollow of the sacrum, will invariably permit of this bi-manual method of restoring the occiput to its normal position; and what is equally true, as my experience has frequently demonstrated, the lower the head is in the pelvis the easier it is to rotate.

Most of the cases in which I have used this method have been seen in consultation with other physicians and have therefore had the test of prolonged labor, and, not infrequently, one or more fruitless efforts at forceps delivery, before I have seen them; so that I feel that the method has been put fairly to the test, and I have yet to find a case in which it did not work out successfully. I do not claim, however, that such a case may not sooner or later be met with.

Having succeeded in rotating the head (which can usually be done in a very short space of time—on a number of occasions in my experience it has taken less than half a minute), the next step is to prevent its return to faulty position, which it has great tendency to do if let alone. It is here that

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I have found it advisable to slightly modify the method of Dr. Porter. As long as the two hands are in contact with the rotated head the new position is easily maintained, but in order to apply forceps—which is undoubtedly the wiser thing to do in practically all these cases—it is necessary for the obstetrician to remove his hands and to rely upon the nurse or an assistant to keep the head in place. Dr. Porter does this by having such assistant superimpose a hand directly over his external hand and continue careful pressure when the doctor's hand is removed. This I found was difficult to do successfully, and I have therefore adopted what I find to be the much easier and more effective plan of having the assistant, who is usually the etherizer, make manipulations through the abdominal wall with a view to swinging the body of the child from the mother's right side toward the left. These manipulations are made coincidentally with the rotation of the head, and not only greatly facilitate the latter process, but by moving the body along with the head and thus avoiding the twisting of the child's neck, the chief cause of the tendency of the head to return to faulty position is removed, while at the same time the assistant, by maintaining the body in its new position—which is easily done—has a much more effective method of controlling the head in the brief interval between the removal of the obstetrician's internal hand and the application of the first blade of the forceps. Experience has proven this little addition to Dr. Porter's well-worked out manipulations to be a great help in many cases, and especially so where the head is yet high in the pelvis.

Rotation having been quickly and satisfactorily accomplished, application of the forceps is easy, and the further conduct of the case may proceed with due time and deliberation.

In conclusion, let me express the hope that the family physician, who is still the

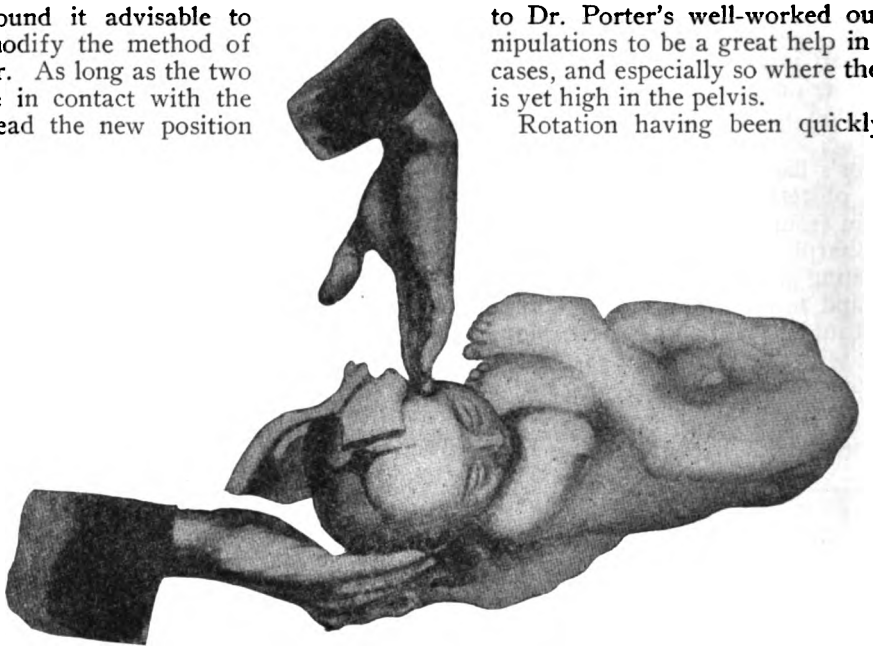

Fig. 2.—Showing right occipito-posterior position of vertex and the position of hands preliminary to rotation.—(Porter.)

Fig. 3.—Position of hands at completion of rotation. Assistant's hands hold child's body and thus control the head until obstetrician withdraws his hands and applies forceps.

Note that the obstetrician is standing to one side for the same reason as given in Fig. 1.

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prevailing obstetrician, may find in the rehearsal of these points something of practical value, and that when he is brought to the necessity of dealing with an occiput that

Fig. 4.—The head has been rotated through ninety degrees and is in the right occipito-anterior position. The hands are shown in their position at the end of rotation. —(Porter.)

is "backward and stubborn," he will especially remember the "Porter method" of rotation, and give it a trial.

P. S.—Since the reading of this paper, three of my friends have reported to me that they have been successful in a trial of this method of rotating the occiput, while a fourth tried it and failed. I have myself had three more cases in this time, one of which, in a small primipara with the head high in the pelvis, was *not* easy, but entirely successful for mother and child. In the second, the head was lower, and rotation was not difficult, while in the third (also a primipara), the woman had been for some hours in hard labor, with the occiput in the hollow of the sacrum, and the vertex in sight at the outlet. Rotation in this case was absolutely *easy*, being accomplished in less than twenty seconds, as noted by a third physician who was present.

2503 North Eighteenth street.

The Relationship of Tuberculosis to Rectal Fistula.

By COLLIER F. MARTIN, M.D.,
Philadelphia, Pa.

It has been observed for many centuries that there exists some relationship between rectal fistula and tuberculosis. The earlier writers held that a patient with a fistula was apt to go into a decline; while many writers in the last century taught that certain fistulæ should not be operated upon, as the operation itself was liable to induce tuberculosis.

Since the discovery of the tubercle bacillus and our more accurate knowledge as to how this and other microbic infections occur, we no longer believe that operative procedure can induce tuberculosis. We recognize the fact that in all probability the tubercular infection antedated the operation, if, indeed, it were not the causative factor in producing the fistula.

Many writers of the present day have tried to lay down clinical rules for the differential diagnosis between tuberculous and non-tuberculous fistulæ. They even go farther; they make a distinction between a tuberculous fistula and a non-tuberculous fistula in a tuberculous patient. My own experience has caused me to believe such a distinction to be misleading, giving a false sense of security that often results in disaster to the patient and keen regrets for the physician.

In a preliminary report to the American Proctologic Society, made last year, I cited a series of 24 consecutive cases of pyogenic rectal infection in which the tuberculin tests gave 23 cases with positive findings. The only negative reaction was in a patient suffering from profound general tuberculosis and who has since died. In most of these cases pulmonary lesions were demonstrable. Since this report my findings have shown little or no variation from the above.

In speaking of rectal fistulæ I would include those cases in the abscess stage, as the presence of a rectal fistula always means an antecedent abscess.

Bacterial examination of the discharges from these abscesses shows most frequently present the staphylococcus associated with the colon bacillus; in the more virulent infections the streptococcus may be present alone or associated with the staphylococcus and colon bacillus. The tubercle bacillus is rarely found in these discharges; more fre-

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quently it can be demonstrated in the scrapings from the wall of the abscess cavity or in sections from the fistulous tract. The absence of the tubercle bacillus in these discharges is hardly to be wondered at when one realizes that it is in no way a pus-producing organism. If present at all it is in such minority that it may readily escape detection by the most careful and experienced microscopist. Cultural methods fail to demonstrate their presence because the rapid growth of the colon bacillus crowds out other bacteria. Inoculations into guinea pigs have thus far been a failure, either because of the presence of other contaminating bacteria or the absence of the tubercle bacillus in the discharges. This may be true even though the patient has marked pulmonary involvement.

The frequent, almost uniform, association of pulmonary tuberculosis with rectal abscess and fistulæ, even where no tubercles can be demonstrated in the rectal lesions, leads me to advance the theory, not altogether new, that the tubercle bacillus reduces the resistance of the patient to the invasion of pyogenic bacteria, and that the local lesion in the perirectal tissues is possible because of this reduced resistance, rather than that it is due directly to the tubercle bacillus itself.

There are undoubtedly many cases where the primary cause of the abscess has been a breaking down by the process of caseation or of mixed infection, of tubercular perirectal lymph glands. This is undoubtedly true of those cases classed as profound rectal abscesses, i. e., the recto-rectal and pelvirectal abscess. The pathway for infection of these glands is probably through the intestinal tract; the bacilli being either swallowed in the food or, more likely still, derived from tubercle-ladened sputum swallowed by a tuberculous patient.

That the tubercle bacillus may pass through a perfectly normal intestinal mucosa and infect the lymph glands without producing any visible or microscopic lesion, has been demonstrated by Dorbrolouski. In the rectum the almost constant presence of erosions of the mucosa from the passage of hard feces renders infection easy. Anatomically the lower rectal pouch is limited by sacculi between the columns of Morgagni; these little depressions under the free borders of the valves of Morgagni frequently become inflamed and the entrance place for the tubercle bacillus and pyogenic bacteria.

I feel that every case of rectal fistula has some direct or indirect connection with a pre-existing pulmonary infection. Whether the lung infection is the result of respiratory implantation or the tubercle bacilli are carried to the lung by the blood stream after they are taken from the intestines by the lymphatics, certain it is that, in practically all of my cases definite pulmonary lesions are found at the time they present themselves for treatment.

It will be seen that the treatment of a rectal fistula is not a simple surgical procedure, but, in addition, requires careful attention to the general health of the patient.

Von Ruck says: "Clinical observations have shown that good pre-existing health and a perfect family history by no means protect against the acquirement of tuberculosis, or even modify its course favorably, and the evidence is growing stronger that impairment of health before the outbreak of the disease depends frequently upon a tuberculous infection which, by its hidden localization or by its earlier insidious progress, was overlooked.

"On the other hand, we have all observed more or less numerous instances of long continued exposure with apparent escape from infection or of a favorable, or an extremely chronic course of the disease, in individuals whose physical and general condition was anything but indicative of a strong constitution or vigorous health; and in studies of the influence upon progress of a tuberculous family history, nothing has been shown to indicate that it interferes with the prospect for arrestment of the disease or with recovery."

Von Ruck lays great stress upon the importance of specific resistance to the tubercular process. That this specific resistance exists we will all admit, but the factors which determine it are too complicated to discuss in this paper.

There are, however, certain physical characteristics, which in themselves seem to indicate a relatively high resistance to the infection.

Cases in which there has been a violent local reaction, where we find considerable organized inflammatory tissue, in the abscess or fistular wall, usually do well after an operation. In some of these cases the fistulæ have probably existed for a long time and the prolonged fight of the body forces against the infection has raised the opsonic index far above normal.

Patients with relatively small fistulæ, or

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recent development, with a scant watery discharge, with little or no localized deposit, have a very doubtful prognosis.

The cutaneous reaction to tuberculin also gives us a remarkably useful index as to the specific resistance, and in this way is probably as useful as it is in clearing up a diagnosis; particularly is this true in adults. Given a patient with positive physical signs of active tuberculosis, the violence of the reaction will be in direct proportion to the specific resistance. Two negative or very weak tuberculin reactions in a tuberculous patient I would consider rather an unfavorable sign.

Speaking of the many questions raised as to the value of these reactions, von Ruck says: "Suffice it to say that these apparent contradictions can neither militate against the specific nature of the tuberculin reactions nor minimize their diagnostic value, since the percentage of positive results is quite generally in harmony with autopsy findings of tuberculosis in the clinically non-tuberculous, and, not only in the adult, but it also corresponds very closely in children to the frequency of infection as shown post-mortem with advancing age."

Granting a preponderance of pulmonary lesions, both active and quiescent, in patients afflicted with fistulæ, we have many factors to deal with. An operation being deemed necessary, we must select an anesthetic which will cause as little disturbance to the lung conditions as possible. Ether is the most undesirable of all. It frequently causes irritation resulting in making an arrested case of tuberculosis again active. In the hands of a good anesthetist, chloroform is a very satisfactory anesthetic, bearing in mind, however, that many old tuberculous cases suffer from chronic myocardial degenerations. Nitrous oxide may be used with comparative safety for short operations, although the difficulty in keeping the patient relaxed is somewhat inconvenient. For extensive rectal operations I am in the habit of using spinal anesthesia wherever tuberculosis is known to exist, or even suspected.

Local anesthesia, employing solutions of cocain, eucain, quinine and urea hydrochloride, or quinine hydrobromide, are fairly satisfactory where one is thoroughly conversant with the technic and the anatomy of the parts. While I frequently operate under local anesthesia, the distortion of the parts from the infiltration of large quantities of fluid and the masking of the congested areas of tissue, render a satisfactory operation doubtful at times. Broadly speaking, the more completely the patient is under the control of the operator the more completely can the operation be performed.

After operation, aside from ordinary surgical attention to the wound, the general condition of the patient is of prime importance. A liberal and often excessive dietary, plenty of fresh air and strict attention to all hygienic principles should be insisted upon. Even after the patient has completely recovered from the local lesion a close watch should be kept; first, that he may recover his general health; and second, that we may note any signs of awakened activity in the pulmonary lesion.

Professional Building.

Treatment of Acute Gonorrhea.

By L. B. Russell, M.D.,
Hoopeston, Ill.

In the treatment of gonorrhea, as in the treatment of every other disease, it is not so much what you use as the way and when you use it. For instance, in certain stages of gonorrhea the nitrate of silver or some of the silver salts are most excellent remedies, yet at other stages they do no good, and may do considerable harm.

It should also be thoroughly understood there is no one remedy or prescription that will cure every case of gonorrhea. It is claimed by some good physicians that a man once having this disease never gets over it. This is putting a more unfavorable prognosis on these cases than should be, but that there are many men who suffer from this trouble and do not fully recover is a fact.

Many young men carry in their pockets a prescription that by them is considered a "sure shot," until it has failed on themselves or some of their friends, and, after all the harm is done that is possible, they are willing and ready to seek a doctor in their behalf.

The druggist, veterinary surgeon, and the patent medicine men, by not understanding the symptoms and pathology of gonorrhea and then going on treating the case, not only do the patients a great injustice, but many times, not realizing that a cure is not effected, allow innocent women to be infected—but this is a subject within itself.

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Now, as to the treatment of gonorrhea, I have nothing particularly new to offer, but I hope to tell of a sort of routine treatment that I have used on the average case that has served me well and that will be of benefit to the readers of this article.

The beginning is a good place to start on any subject, so it may be well to start back and just make a short review of the anatomy of the urethral canal—and this is of special importance where sounds, catheters, etc., are to be introduced; so, of course, it is of more importance in chronic gonorrhea that the anatomy of the urinary organs should be well understood. In acute cases the introduction of instruments is largely contra-indicated.

It will be remembered that the urethra is divided into four divisions—intravesicular, prostatic, membranous and cavernous. The fosso-navicularis is situated about one inch from the external orifice, and infection of gonorrhea takes place here and extends backward, but the severity generally decreases the further the disease gets from the primary infection. The disease is sometimes limited to the anterior urethra, but it may, and frequently does, reach the posterior urethra. The gonococcus grows on and in the urethral mucous membrane. The germs cause inflammation and suppuration. The inflammation may reach the deeper tissues, and sometimes the suppuration is not confined to the urethral mucous membrane.

This is only a part of a great deal more that might be writen to show that to treat this trouble successfully it is necessary to know something of the anatomy and pathology of these parts. It is just as important to know the conditions in both health and disease to make a good genito-urinary man as it is for the gynecologist to understand the anatomy and pathological conditions of the uterus to do a good curettage.

Let us pass from here and take a history of the case: get the occupation, age, married or single, pulse, respiration and temperature, and make a complete physical examination—and frequently there is something found that has a bearing on the case, such as constipation or indigestion—all of which should be corrected to treat the trouble properly. Get a history of the present trouble, how long it has been noticeable, and how long from the time of exposure until the discharge. If a discharge is found coming from the urethra it is always best to examine it under the microscrope, for it must be remembered that all discharges are not caused by the gonococcus; it may be either a chancre, or more frequently of these two a chancroid. If, on a careful examination of the discharge under the microscope, gonococci are found, the treatment is the next thing in order.

The diet should be light; pork and gravies should not be allowed. Fried foods should be largely eliminated. There are two theories as to the amount of water that should be drunk. One is that the more water that is taken the more urine will pass and consequently the better the urethra will be washed out; the other one is, that the more urine there is passed the more irritation produced on an already inflamed surface. I have tried both ways, and I don't see that there is very much difference, but rather prefer plenty of water.

Smoking, except to excess, does very little, if any, harm. Alcoholic stimulants should be forbidden.

The bowels should be kept well open with calomel and Epsom salts.

The internal treatment has not been very satisfactory with me, and about all I use is hexamethylenamin; other remedies, such as methylene blue, copaiba, etc., having been disappointing. I have not used the vaccine enough in acute cases to know what to think of it, but in a number of chronic cases I have used "Mixed Vaccine-Gonorrhea" with excellent results.

The way in which the local treatment is given is very important, and there are two or three ways this can be done successfully. A syringe of a capacity of not less than two ounces should be used, and this syringe should be all metal, so that it can be thoroughly sterilized. Take a syringe of this size and the injection can be forced clear back into the bladder, and this is important, because the urethra, when at rest, is a closed canal, and in order to obtain results at times there must be some pressure. The physician in charge should always use the injection on his patient at least once a day; because of the pain connected with the injection the patient frequently refuses or neglects to do a first-class job. Another very good way is to attach a catheter to a fountain syringe and insert the catheter as far as one thinks necessary and irrigate. There is the objection made to this that it is more pain-

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ful, more danger of producing gonorrhea in the posterior urethra, and it is further claimed by some that you get more infection by the use of the catheter and that there is more danger of orchitis or epididymitis. The history of my cases does not confirm this latter claim, but it is probably better to use the metal syringe in the great majority of cases.

Another very good way to wash out the urethra is with the Chetwood irrigator. In using the catheter it is well to have the patient lie down for the first time or two, because the first introduction frequently causes a faint feeling, and perhaps one case in every four or five faints clear away when standing on the feet.

In all cases of acute gonorrhea I believe the best remedy to use is a 1 per cent. solution of Thallin sulphate. This is a remedy many years old, but in my works on diseases of the genito-urinary tract it is only mentioned in one, and that is the book of Leopold Casper. Thallin sulphate has an anti-gonorrheic and antiseptic action. It relieves the inflammation and changes the thick pus discharge to a thin watery one in from one week to ten days. It should be used from four to six times a day, and it can be used still oftener to advantage. It is non-irritating and a remedy that is very grateful to the patient. It is so soothing to the inflamed surface it makes urination much less painful after a few injections, and it gives to the physician that valuable asset of having the confidence of the patient, which is no small item in treating all diseases.

Casper says: "There are cases in which Thallin sulphate fails: in such very weak solution of potassium permanganate (1: 10,000-1: 8,000) or a 1 per cent. solution of resorcin may be substituted." There may be cases where the Thallin fails, but I have had no case of this kind. I have at times used both the potassium permanganate and resorcin. In the early stages I have never had much success with permanganate, but the resorcin acts very nicely. After using Thallin for a week or ten days it is best to go to the nitrate of silver or some of the silver salts. The nitrate of silver is probably the best, but the main objection to it is that it stains so not many want to use it, and the physician must use it with care or get his fingers well stained, unless he uses rubber gloves, which is a good thing to do. If nitrate of silver is to be used a solution of 1: 10,000 is about the right strength with which to start. If it is desired you can use some of the other silver preparations rather than the silver nitrate. Wherever silver or any of the silver salts are used the discharge usually increases, and this is necessary to slough off the mucous membrane in order to get the gonococci that are imbedded therein. The silver preparations should be used from one week to ten days, and at the end of this time it is best to change back to the Thallin, resorcin or zinc sulphate, any one of which will act very nicely, if used in the proper strength. The Thallin should be used in the same strength as in the beginning, but it is not quite so efficient as in the early stages of the disease, so it is probably better to use zinc sulphate, 1: 500. Resorcin, in 1 per cent. solution, acts very nicely. The permanganate of potassium is a better remedy in this stage than in the beginning.

If one of the remedies used does not give you a cure in from four days to a week it is well to return to the silver for three or four days, and then back to the zinc sulphate.

It takes from three weeks on to cure a well-marked case of gonorrhea, although there are cases which are very easily aborted, but unfortunately these belong to the minority.

I have had just one case aborted with Thallin sulphate:

J. S. H., age 23, came for examination and treatment November 14, 1910. History showed he was exposed November 5, 1910. On date of examination there was a very slight discharge, which showed gonococci under the microscope. He was placed on a 2 per cent. solution of Thallin sulphate and discharge disappeared and nothing could be found under the microscope the second day thereafter, nor up to this time have I been able to find any signs or symptoms of gonorrhea.

You now and then see considerable written about the abortive treatment by nitrate of silver, but, on the whole, the abortive treatment is unsatisfactory. Once in a while it is almost necessary to do something desperate.

Several years ago I was called to the office at midnight one Saturday night by a married man, who, on starting to bed, discovered that he had a slight discharge. Examination under the microscope showed

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gonococci. He informed me he must have relief at once. The urethra was irrigated with a 2 per cent. solution of silver nitrate and thirty minutes afterward an irrigation was made with a saturated solution of boric acid to relieve the burning. This was repeated Sunday morning. Nothing more was done, except to irrigate with boric acid solution Sunday evening and Monday morning. All symptoms of the gonorrhea had disappeared by Monday evening, and he was never bothered afterward.

But in the ordinary run of cases it is better to take more time, because if the abortive treatment does not work you have a nice inflamed surface for the gonococci to work on, and they have a better chance to become deeper seated.

Prophylaxis and Treatment of Pneumonia.

By D. W. Reed, M.D.,
Greeley, Colo.

Notwithstanding the phenomenal progress of medical science during the last two decades, recent statistics inform us that the rate of mortality from pneumonia is slowly but quite perceptibly rising.

Why should this be so? Every physician should carefully study this question and do all in his power to solve the problem.

The writer has given some thought to the subject for the last fifteen years and offers a few suggestions:

First, there are many more cases of pneumonia than formerly. This is possible, because the people of the present time indulge in habits which break down our bodily defenses far more than the people of the previous generation.

Overeating is one of our national sins. Not only do the majority of the American people partake of three "square meals" each day, but very many of them often indulge in banquets in the night, at which rich viands are served, consisting of many courses, which greatly overwork the digestive organs, requiring all of the reserve energy of the body to digest the excess of food and eliminate it from the body. This gluttony also overtaxes the excretory organs, fills the blood with waste materials, producing an autotoxemia which makes the gourmand an easy victim to any disease.

A second factor is the sedentary habits of many professional people. They take very little exercise beyond what is necessary to ride from residence to office and back to residence again, and to sit in an upholstered chair.

They may spend an hour or two on Saturday afternoon at tennis or golf, but they take no regular daily systematic exercise to keep the muscles hard and ready for physical emergencies, and to demand a large portion of blood in the working tissues—the skeletal muscles; therefore the chief working organs are the involuntary muscles—the stomach, heart, etc—and most of the blood is in the abdominal and thoracic vessels. Hence when a physical emergency arises or the play is unusually vigorous the lungs are engorged, congestion occurs, inflammation begins and we have a full-fledged case of red hepatization, unless the condition is recognized and promptly corrected.

A third factor in the causation of the high mortality rate, in the writer's opinion, is that we, as physicians, do not administer or recommend the treatment that will promptly correct the unbalanced condition of the circulation until red hepatization is fully established. I do not say that we are so ignorant that we do not know how, but I do say that some of us are so (infernally) lazy that we prefer not to do the work that would be required to correct the condition quickly, and so the patient is allowed to die from lack of prompt treatment when a little rapid work at the proper time would save a human life.

We are far too apt to write a prescription for some medicine, tell the friends to get it filled at the drug store, say we will call again next day and depend upon the medicine to do the work. This is so much easier and so much more dignified than what follows.

How then may we correct the unbalanced condition of the circulation while there is still a chance to avoid red hepatization?

First place the patient in a hot, full bath at about 99° F., and gradually raise the temperature to 104° F. or 105° F. Keep him there till the skin is red and the superficial blood vessels are dilated and filled with blood. This will relieve the congestion of the lungs and other internal organs.

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Then put him in a warm bed and place hot-water bottles to sides, thighs, legs and feet, and an ice bag filled with crushed ice to each side of the thorax below axillæ, and an ice-cold compress over chest in front covered with several thicknesses of flannel, and cover the patient up well in blankets. These cold applications should be kept cold by frequent changing. By these measures the congestion in the thorax will be very soon relieved, the pain will be gone and the patient saved from a dangerous attack of pneumonia.

While this method is being followed, for quick relief other means may also be applied. The bowels should have attention, the proper evacuant administered and a sedative to the heart if necessary; but if the above treatment has been skillfully given no aconite will be necessary in most cases.

If full bath conveniences are not at hand a hot blanket pack can be substituted and equally good or better results expected. The cold applications should be adjusted as above described, while the patient is in the hot pack, also the hot-water bottles. After an hour in the pack the superficial vessels will be well dilated and the treatment suggested to follow the hot bath should be given.

One other point should be emphasized: The physician should, on all proper occasions, educate his patrons by precept, and especially by his example, how they may avoid the conditions that will make disease probable.

Teach them to be temperate in eating as well as to abstain from alcoholics and narcotics and tobacco, and impress the importance of ample exercise, bathing, ventilation and other health developing habits. If we should do these things I am convinced that the mortality rate would be perceptibly lowered.

Roentgen-Ray Research on Absorption of Mercury and Salvarsan.

Ullmann and Haudek report in *Wien. Med. Woch.* the results of extensive research in this line which emphasize the advantages of fractioning the salvarsan so as to inject it in minute doses at several points at once; only a small proportion of a large dose seems to be completely absorbed and the unabsorbed portion is a menace to the tissues.

Vaccine Therapy in Infected Wounds.

By G. H. Sherman, M.D.,
Detroit, Mich.

The successful handling of infected wounds is a very important factor in general practice. If we could have accurate statistics of the deleterious consequences following seemingly insignificant injuries from infections the showing would, no doubt, be appalling. Many a person has lost a limb or his life as a consequence of such an infection that was not brought under control.

Abrasions of the skin from slight cuts, scratches, needle pricks, thorn pricks, tramping on a nail, etc., are of such common occurrence that ordinarily they are disregarded and heal without any special treatment; but not infrequently these trivial affairs become infected with virulent pathogenic organisms, and the patient, after trying various home remedies, consults the family physician for treatment. Usually in such cases the infection has extended beyond the reach of local antiseptics, and constitutional resistance to prevent the infection spreading is the most important factor to be relied upon.

In cases of more extensive injuries a physician is generally called to take care of the flesh wound, and even in such cases, where the utmost care is taken in cleansing the wound with antiseptic solutions and dressings, infections sometimes take place. Often wounds are penetrating or lacerated to such an extent that thorough cleansing to a point of an aseptic condition is impossible.

When an infected wound exists it is evident that the systemic resistance to the infecting organism is not adequate. To get rid of the infection nature's immunizing mechanism must be stimulated into action for the production of immunizing substances. In the natural course of an infection this stimulating effect is brought about by substances absorbed from the infected area. If the infection continues to spread it is quite evident that the immunizing mechanism is not being sufficiently stimulated. Some observers believe that the immunizing mechanism is stimulated by the toxic materials absorbed from the infected area, and consequently contend that vaccines should not be used in the early stages of an acute infection where consti-

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tutional disturbances exist, as indicated by fever and other symptoms, considering that in such conditions an overstimulation already exists. It is from such reasoning that statements like the following are found (Dr. Edward H. Ochsner, *The Medical Herald,* January, 1911, page 36):

"Vaccine therapy has its field of usefulness in the septic infections, but only in the later stages, and then only autogenous vaccines. There are so many species and strains of streptococci and staphylococci that stock vaccines may do more harm than good, and it always takes several days to prepare autogenous vaccine. In the neglected cases, when the resistance has been greatly reduced, who are sluggish and do not respond properly after the acute symptoms have subsided, the judicious use of vaccines will sometimes greatly hasten the recovery."

The author here lays special stress on using the vaccines "only in the later stages" and "after the acute symptoms have subsided." Also that "stock vaccines may do more harm than good." From my observations such conclusions can only rest on theory and not on extensive experience with the use of bacterial vaccines.

Experience is a better teacher than unproved theory. Observation in actual practice shows that in extremely toxic cases the infection spreads most rapidly. This would clearly indicate that the toxic materials do not stimulate the immunizing mechanism, but hinder its operation. If the toxic element in the infective process is the one that stimulates the immunizing mechanism, a time would inevitably be reached in every acute infective process where the immunizing apparatus would be sufficiently stimulated to bring about an immunity, but in actual practice we often find the reverse to be the case. Instead of the patient becoming immune to the infecting organism he dies, not from tissue exhaustion, but toxemia or paralysis of the nerve centers. It seems that, in severe infections, the toxic materials being produced in superabundance so irritate the surounding tissues that they thereby hinder the absorption of the substances needed to stimulate the immunizing mechanism.

On the other hand, with the use of a vaccine enough dead organisms are thrown under the skin elsewhere to produce a reaction, but not enough inflammation is produced to prevent the absorption of the substances which stimulate the immunizing faculty of the system.

Any one having a large experience with bacterial vaccines cannot help being impressed with the marvelous disappearance, in many cases, of an inflammatory process after one inoculation. All this cannot very well be ascribed to the vaccine. It is more reasonable to suppose that, after the immunizing mechanism has been sufficiently stimulated by the vaccine to retard the inflammatory process, additional immunizing stimuli are set free from the infected area.

In treating wounds the possibility of a tetanus infection should always be kept in mind. This may be determined by the character of the wound and the surrounding condition where the injury was received. If the wound is superficial and has not been bandaged to exclude the air, tetanus infection is not liable, because the germ, being anaerobic, will not grow when exposed to the air. The tetanus bacillus being prevalent in rich soil and barnyard manure, deep wounds being exposed to such filth should always be regarded as being in danger of a tetanus infection. The tetanus bacillus causes very little, if any, local disturbance in a wound, and often, in a few days, disappears from the point of infection, while it continues to grow in the nervous system, especially in the ganglion on the posterior root of the spinal nerves. Wounds caused by toy pistols in the hands of boys are particularly favorable to tetanus infections. The character of the dirt on the average boy's hand makes the presence of the tetanus bacillus always possible. The force of the explosion makes a small penetrating wound, carrying the dirt deep enough into the tissues to exclude the air, so that the tetanus bacillus can develop. The germ causing no material local disturbance the injury is disregarded until constitutional symptoms develop. Wounds accompanied with much local disturbance, inflammation, pain and swelling can safely be regarded as not being due to tetanus infection.

In all cases where a possible tetanus infection is suspected antitetanic serum should be given without delay. The prophylactic value of this serum is well established, while its use as a curative agent, after the constitutional symptoms have developed, is not so pronounced.

After having excluded a possible tetanus infection, the question naturally arises as to what the infecting organism is. In many

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instances this can be determined by making a bacterial examination of the purulent matter discharging from the wound, but in most cases it is essential that treatment should be started at once to immunize the patient against the infecting organism, to prevent the infection spreading, and to make a bacterial examination usually means twenty-four hours' delay. Furthermore, the wound is often of such a character that the infecting organism could not even be found. In case of a pentrating wound made by tramping on a nail the germ causing the trouble may be carried deep into the foot, while the germs found at the point of entrance may be entirely different. In many cases where the skin abrasion was slight the original wound may have healed over, while the infection is progressing in deeper tissues. In such cases bacterial examinations would be impossible.

In this connection we should keep in mind the most probable dangerous organism, the streptococcus, and also the more probable but less dangerous staphylococcus. Bacterial examinations in these cases are always desirable, but ordinarily a diagnosis made from clinical symptoms is sufficient for the successful administration of the vaccine. Infections that spread rapidly, and especially if the inflammation runs along lymphatic channels, leaving red chains, can safely be considered streptococcic. Staphylococcus infections are more closely confined to the point of infection and spread much more slowly. A more common occurrence is a mixed infection of both organisms.

From these considerations it would seem that the most practical thing to do is to give the patient a dose of streptococcus-staphylococcus combination vaccine at once. Some one may raise the objection that such procedure would not be scientific because a vaccine might be given where no corresponding infection exists. In this connection it should be remembered that an average dose of vaccine, if given where no corresponding infection exists, is entirely harmless, having no effect except to raise the immunizing power against this organism. This is an advantage, because it serves to fortify the individual against a later possible infection by these ever-present micro-organisms.

Delay in giving the vaccine is dangerous because, if the infection should extend rapidly, enough toxic material may be absorbed to cripple the immunizing mechanism sufficiently so it can no longer be aroused into activity. It is not advisable to use autogenous vaccines in the early acute stages, because that means several days' delay in treatment before the vaccine can be made. Nor should treatment be delayed for making a bacterial examination; clinical symptoms in such cases are sufficiently clear to indicate what vaccine to use.

In cases of more extensive wounds that have been cleansed, stitched up and dressed by a physician, where there is the least suspicion, a day or two later, that an infection exists, a dose of streptococcus-staphylococcus combination vaccine should be given. This will raise the immunizing power at once and retard or abort the infective process. I find that 30,000,000 streptococcus, combined with 100,000,000 each of staphylococcus aureus and albus, is a good average dose. Ordinarily the dose should be repeated on the second or third day. If no material improvement should be observed within twenty-four hours the dose should then be repeated. As a general rule, inoculations should be made at shorter intervals in cases of severe infections than in milder ones. Improvement should, with few exceptions, be observed within twenty-four hours after the first inoculation.

The vaccine treatment in these cases will not in the least interfere with any local or other treatment that might be desired. Rest, in cases of infections, is always desired. It has frequently been demonstrated that fatigue has a marked influence in lowering the immunizing powers against pathogenic bacteria.

From frequent observations in my own cases, and from consultations with other physicians, I feel confident that bacterial vaccines are the most valuable remedies at our command in treating infected wounds, especially when used early in the course of the infection.

Vaccines in Rheumatoid Arthritis.

In two cases cited in the *Brit. Med. Jour.*, Jan. 28, 1911, by G. A. Bannatyne and J. Lindsay, the results of serotherapy have been so satisfactory that they are encouraged to hope that in vaccines a cure may be found for many acute cases of rheumatoid arthritis. In both cases the micro-organisms were obtained from blood taken from veins of the antecubital fossa of the arm, after every precaution had been taken to ensure the impossibility of skin contamination. The media on which the cultures were obtained was blood-agar. Microscopically, the organism was found to be a micrococcus, arranged in clusters.

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The Treatment of Scalp Wounds.

To The Medical Council:

The timely article in the February Council concerning the dangers attending scalp wounds, especially those involving the deeper tissues, was read by me with great interest, perhaps because such cases are common in my work among the miners. The method of treating such wounds which has served me best may be of some interest to the readers of The Council.

But before speaking of the treatment I wish to say a word concerning the wounds and their causes which come under my care. The majority are caused by falling rocks, mostly copper sulphide. This rock is very heavy and tears a ragged gash, which it leaves filled with what we call "sulphide dust," and tissue débris. Once in a while I get a wound caused by a fragment of sulphate ore, the common "blue stone." This, owing to the action of the copper sulphate, I find the most dangerous and refractory. Out side the mines bottles cause more scalp wounds than all other instruments combined. A bottle is always handy in a saloon row, and of these—well, they are like the poor, always with us. In these broken glass is my great fear, for I defy any "bug" to live in the presence of booze such as is sold here, and the wound is usually pretty well soaked with it.

The line of treatment which I follow is as follows:

I first shave the head carefully for at least three inches in all directions from the wound. This is followed by scrubbing, first with an antiseptic soap, then with alcohol. The wound is then washed with sterile water until no trace of foreign matter can be detected. I now trim the edges of the wound and check bleeding with hot water, then wash the wound out again and dry with sterile gauze. Next comes what I regard as the important part of the procedure, the disinfection of the wound itself. This is done by swabbing with a 10 per cent. alcoholic solution of iodine tincture. With a bit of cotton twisted on a flexible applicator I thoroughly swab out the wound, taking care to reach every point, for on this success depends. After this the wound is closed, either by adhesive straps put on warm or by sutures. If in the hair I use the former, as they can be easily removed if it becomes necessary to open the wound. If on the forehead, I use fine horsehair sutures. Both methods give good results. An aseptic dressing and bandage completes the operation.

I have been using this method for about six months with one infection, a wound into which "blue stone" dust and other dirt had been rubbed for hours, the man not thinking the wound severe enough to quit work. Before this time more than half of all sulphide wounds showed pus formation. Hence I believe my faith is justified. In a few cases, where an unusual degree of infection was to be found, I have used the pure tincture with the same excellent results.

Although writing of wounds of the scalp, it may not be amiss to say that this method gives equally good results when used in wounds situated in other regions. Two villainously dirty compound fractures so treated made an uneventful recovery. The method of procedure may be modified to meet conditions, the only point upon which stress is to be laid is the *thorough* application of the iodine.

While on the subject of iodine, I might add that in at least two emergencies I have used the tincture as a skin and hand disinfectant with most pleasing results.

J. M. Leonard, M.D.,
Surgeon, Leonard Copper Co.
Gleeson, Arizona.

Suspicion-Diagnosis as Applied to Diseases of Women.

By Douglas H. Stewart, M.D.,
New York, N. Y.

What I term "Suspicion-Diagnosis" is simply a snap-diagnosis resting on the science of clinical probabilities and not on scientific medicine. Further and more careful search will enable one to touch the "spot as with the point of a needle," and this with a minimum of time and labor. Call it the female's rule of three, if you choose. Here it is:

Granted that three women are hysterical, anemic and without a cough, then "all or three have some misplaced abdominal organ. Two will have the displacements limited to the alimentary tract. The third will have both genital and alimentary tract involved."

Granted that three women appear plethero-hysteric. Two will be proven anemic by a blood test and come under the foregoing rule. The third is really plethoric, but has trouble about the gall bladder—usually an unsuspected stone.

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Finally, a woman seems well-nourished but complains that "nothing will put fat on her," though she has tried many means to that end. Here will generally be found an unsuspected chronic appendicitis, with more or less extensive adhesions interfering with the motion of the caput coli. Of course Suspicion-Diagnosis precedes your examination and should be made silently while the patient is defraying the expenses of the conversation, and, perhaps, incidentally wasting your time by narrating non-essentials. It tells you what to look for first.

Why this rule is usually correct would take too much space to explain, but it is based on a rather extensive experience in clinic, in operating room, and in the autopsy chamber. The more skillful one becomes in abdominal examinations the fewer exceptions will be found.

128 West Eighty-sixth street.

The "Born Doctor."

To The Medical Council:

Did you ever see a real "Born Doctor"? Well, they are a great curiosity. I saw a fine specimen up among the hills of Vermont many years ago, when I was a very small boy. They all said he was a "real born doctor." He came to my father's house occasionally, and he had a faculty of telling things in a way that made one small boy, at least, feel that he knew all that there was to be found out on the subject.

Long before I thought of studying medicine I listened attentively to him while he was telling my father about his oldest child dying with scarlet fever many years before. He said that the eruption did not appear and he had a very high temperature and grew worse rapidly, and finally died, in spite of all the family physician could do. A second child was taken sick in the same way one day after the first one, and so he told the physician he should have given him an emetic, but the doctor said that would surely have killed him; but he said: "My oldest son is dead, and this one is going the same way as fast as it can. It is my child. I want you to deal out a dose of ipecac large enough to vomit him and I will give it, and take all responsibility of results." The doctor prepared the dose of ipecac and he gave it to the child, and in a few minutes gave him all the warm water he could get him to take. Soon the child vomited, and, after a little while, began to perspire, and soon the eruption came out freely and the child began at once to improve and made a good recovery.

Some fifteen years later I graduated from a medical college, took a postgradute course, and, knowing the whole thing, of course I proceeded to show the people what a fellow could do that wasn't "born" that way. It was not very long before I had a case of scarlet fever just such as I had heard the old "born doctor" tell about, but unfortunately I had forgoten what he said about it, and not being taught in college, of course it was not worth remembering. My patient, however, rapidly grew worse, and seemed to be literally burning up with fever. I had tried everything I ever had read about or heard of being used in such cases, but nothing seemed to do any good, and I thought the child could live but a few hours longer, when, all at once, the vision of the old "born doctor," and his remedy flashed across my mind. I at once decided to try it, and found it worked just as he had said it did with his child. In a very short time the perspiration began to start and in a little while the eruption came out nicely and the patient gained from that minute and made a good recovery. I have tried it many times since, and it has never failed to work equally well in every case.

Later, I had a case of measles that acted the same way, and the wise old ladies, that so often think they know, were there, and they said that young doctor didn't understand his business, for they had seen many cases of measles, and that was not a case of measles. They were so positive about it that it had some effect to make me wait to see what might develop. The child kept growing worse, not as rapidly as did the case of scarlet fever, but steadily for about two days, until I became thoroughly satisfied that the child must have different treatment or it would not live long. I decided to give ipecac and treat it the same as I had the cases of scarlet fever, and it worked just the same as it did in those cases, and the patient made a fine recovery.

If you never have tried it and you have any trouble along this line, just give it a trial and perhaps you will feel like taking off your hat to the "born doctor."

B. J. Kendall, M.D.

Geneva, Ill.

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The Demise of the Draught Delusion.

By WILLIAM BRADY, M.D.,
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A familiar morsel of advice handed out by the good old family doctor is: "Secure good ventilation—but be careful about draughts!" The dawn of the modern therapy of tuberculosis brought the revelation of the value of fresh air as a remedy of first importance. Fresh air implied ventilation and ventilation required open windows.

Now, fresh air, particularly "night air," was formerly considered a baneful medium of respiration. This was before the days of bacteriology. A century ago the nearest approach to a suspicion of a parasitic factor of disease was scarcely more than a vague belief that a certain popular disease was in some way related to the *acarus scabici;* and even this wisdom was possessed only by those blessed with exceptional acuity of vision or strong magnifying glasses. Inasmuch as there were, besides the ubiquitous itch, a host of other diseases prevalent in the community, our medical forefathers were perforce constrained to attribute the various attacks of illness to some plausible factor, and what better factor could they have chosen than the universally useful one of "catching cold"?

Think of the vast saving it means to our noble profession—the saving in time, energy and needless study. How convenient it is when we are ignorant of the nature of some oncoming illness to tell the unsuspecting patient he has "contracted a severe cold" which "settles" here or there as the case may be. It matters little whether the illness be the measles, cerebro-spinal meningitis, pulmonary tuberculosis or lobar pneumonia; nothing so easy as to explain later that the "cold" has "turned" or "run into" or become "complicated" by whatever the exigency may demand. The beauty of it is that it always works well—patients never fail to recall some passing zephyr, some draught, some wetting of feet, some change of weather to corroborate the diagnosis. Moreover, if a struggle comes along about 3 P. M. with the first signs of a tonsillitis, a pleurisy or a typhoid, you do not have to waste valuable time on him; just call it "a cold," hand him out a pocketful of blunderbuss "coryza" or "cold-improved" tablets, take his good money and hurry away to the ball game. Patch up the diagnosis later at your convenience and the patient's physical and financial expense. There is nothing to fear in this—custom dictates such conduct—and the shining lights of the profession confirm it by their practice.

In their day our forefathers were wise men; some of their medical inventions have served to bridge over many a gaping abyss of medical science. The catching cold racket, however, is entitled to the highest award as an all-round useful scheme for deluding a patient until one is able to determine what ails him. Many patients are so readily victimized by the cold delusion that one may bungle a surgical operation, the treatment of a wound or a case of confinement, and cover one's tracks by explaining that the victim has "taken cold in it"—without loss of dignity, too!

But, to return to the advice of the old family doctor, just how the patient was to secure ventilation but avoid draughts was a question the astute medical adviser tactfully avoided until some genius eventually came forward with an invention which solved the problem to the eminent satisfaction of all concerned.

This was the window-board, a contrivance which long enjoyed considerable vogue, but which is now relegated to antiquated institutions like government buildings and old ladies' homes. Occasionally you may still find them in doctor's offices, where, we presume, they are retained merely to show patients what to avoid.

The window-board admirably combined placation of draught-deluded minds with partial ventilation in a way which tended to prepare the lay mind for the inevitable doctrine soon to be promulgated, namely, that clean draughts are harmless. This doctrine shows itself in the remark of Dr. Flick at the last International Congress on Tuberculosis. "The patient," said Dr. Flick, "may well sit between open windows if he is comfortably clothed." It again displays itself in the words of Dr. Whitbeck, who, writing on surgical tuberculosis in the *New York State Journal of Medicine,* says: "The windows are never closed day or night, summer or winter. . . . The word draught is unknown in the vocabulary of Sea Breeze Hospital."

Of course, the fact that the incoming current of air was forced by the window-board to take a jump over the lower sash did not mitigate the vengeance with which the dreaded draught pursued the even tenor of its course across the room, but it *did* put a

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quietus on the psychical distrust of the draught and so accomplished a world of good. The window-board did not stop the draught, but it helped to stop the draught delusion. So effectually did it do this that here and there venturesome souls began timidly to try larger doses of fresh air; these having proved innocuous and even salutary, the board was finally removed and the sash raised to the last peg—with a result which was marvelously good.

Then the entire window was removed and no fatalities were reported. Untrammeled progressives were thereby emboldened to attempt the final desperate experiment of porch bedrooms. Howls of horror and dismay went up against this "extreme measure," but, even while the howls continued, the very favorable results were apparent from the beginning. The porch bedroom pioneers had courage indeed; but to-day no home can be called truly modern without its convenient sleeping porch. Blessed be the victims of the tubercle bacillus who camp out every night; and thrice blessed are the victims of the pneumococcus who entertain their unwelcome guest on the porch. Give the pneumonia sufferer a properly made bed on a porch with southern exposure, cap, mittens, food and water—and then, if he is so fortunate as to have the aid of biting cold winter weather, you may rest assured that he will rout the pneumococcus.

Any practitioner who doubts the efficacy of "cold storage" in the treatment of pneumonia would almost certainly be convinced could he observe the comparative condition of a patient an hour before and an hour after the exodus to the side porch. Temperature, pulse, respiration, all show unmistakable improvement; and most important of all, the sufferings of the pneumonia victim are distinctly relieved by the cold air. The pneumococcus finds the freeze-out reception extremely distasteful to its mode of life.

A porch ceases to be a porch, so far as the pneumococcus is concerned, when the atmosphere of the living room is taken out along with the patient. That is to say, enclosed porches and heated porches are not suitable to pneumonia cases. It must be an open porch; the patient wants air, and he likes to *feel* it coming. He enjoys a gust of wind. He welcomes a draught.

A draught, says Webster, is "a confined current of air; the drawing or moving of air." Obviously, one cannot "secure ventilation but avoid draughts." But we must remember that the advocates of the draught delusion do not adhere strictly to the etymological definition of the word draught. They employ the word rather in its household sense; this is a vague, elusive idea that a draught is some dreadful thing you must have been exposed to shortly prior to your present illness. If the meaning is not sufficiently clear to the reader, I would refer him to any maiden aunt or militant grandmother among his patients for further particulars—with the recommendation that the reader approach the subject with due humility, for so he certainly will leave it!

It must be granted that sometimes a draught brings illness to the unfortunate who may rashly expose himself to it, but never a *clean* draught. Any draught coming under the genus clean—whether the species be hot or cold, moist or dry—blows good to mankind and discouragement to his enemy, bacteria. The *dirty draught* is the one which accounts for our ancestors' catching cold-phobia; the dust particles make ideal aeroplanes to convey pneumococci, micrococci catarrhalis, tubercle bacilli, diphtheria and other germs to a patient's nostrils. But these are all domestic germs; they do not thrive on the porch in the winter. Thus a draught blowing from indoors out on the porch may do harm, but a draught from the outside blowing in cannot do harm if the air comes from a clean source.

We are coming gradually to recognize that the "ordinary cold," so-called, is an epidemic disease, as Osler has described it. Outside of household parlance and small talk—very small talk—in doctors' offices, we know that the way to prevent "colds" is to enforce reasonable isolation of every sufferer and to disinfect handkerchiefs as rigidly as though the bacillus diphtheria were present, instead of the micrococcus catarrhalis or the pneumococcus. Mothers who complain that "Mary" or "Johnnie" "takes cold so easily," should be instructed to watch Mary's or Johnnie's playmates and find the germ carriers among them. These mothers should be told that when little Freddie from across the street comes over to play, with a running nose or a barking cough, he is a menace to Johnnie's and Mary's health, and should be sent scooting for home, there to remain until well.

I have not the least doubt that before many years we will be required to report coryza cases to the health officer, and that the infected centers will be discovered

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thereby, just as we observe in the case of diphtheria, tuberculosis, typhoid and scarlet fever.

Every item of scientific evidence available favors the infectious, epidemic nature of so-called "colds." There is no evidence to be found to favor the notion that draughts, "exposure," "change of weather," etc., are particularly injurious to the health of the individual. We are very prone to attribute every change for the worse in a patient's condition to "the change of weather," but we never credit a change for the better to the much-abused weather. Our climate, according to the "catching cold" champions, is not a climate, but merely samples of weather assorted to suit the doctor, especially, and as such is to be blamed for most of the ills that flesh is heir to.

The final test by which one may determine whether the catching cold phobia has been completely eradicated from one's mind is performed as follows: Walk through the street some wet night without your rubbers on; when your feet are well wet through, go home, throw off your coat and vest, take a chair, your pipe and the evening paper and seat yourself where a draught from an open window will strike the back of your neck. If you can maintain this desperate position for half an hour without feeling any fear or worry, your cure is complete. The only precaution to be observed in taking the test (if you are not a married man) is to analyze the draught first to be sure it is a *clean* draught.

1008 Lake street.

The Weak Points and Limitations of Public Hygiene.

By Thomas S. Blair, M. D.,
(Author of "Public Hygiene")
Harrisburg, Pa.

We will consider this question from two points of view: that of public policy and that of the medical profession at large. No body of men representing an ideal and no set of ideas can hope to permanently advance or receive support unless the men and the ideas they propose are in furtherance of sound public policy. In this matter the public properly insists upon being the judge. An informed public creates a public opinion from which there is no just appeal. Public hygiene, in its several phases, is under trial by a sympathetic public, and we need have no fear as to the ultimate public verdict But the public knows and all physicians know that no form of scientific and social advance is perfect and that they all present some weak places in the propaganda or methods pursued, and that time and patience can alone eliminate.

Public questions are usually many-sided, and public sanitation is no exception to the rule. No one can claim that this modern problem is purely a medical question, a sociologic question, an engineering question, or a legal question. These and other elements are involved, and we doctors must not only be content with, but should be thankful for, the co-operation of many classes of citizens in the work of conserving the health of the public. The doctor is, first of all, a citizen in these days, and it becomes us to extend the range of our information and to take broad and liberal views if we wish to be consulted concerning, or take our proper place in, the work under consideration.

International relations are extending, and it is this factor that first concerns this study. Quarantine, the first process of public sanitation, had its origin in international and interstate relations. "The new nationalism" being fostered by some American thinkers is an assertion of our duty to our neighbors. "The stand-pat" and the "sit-tight" policies are out of date. But not all nations are doing their duty. We recently saw the statement made by a noted American sanitarian that the Public Health and Marine Hospital Service of the United States knew of infectious cases in a given port before the government of that seaport knew of the conditions. The writer has no doubt this assertion is true, and it is a gloomy commentary upon how little quarantine means with some governments.

Probably the Welcome Research Laboratories at Khartoum know in advance of the British, French, Belgian, Moroccan and native governments of threatened conditions in Africa as regards epidemic disease. Probably the Ganges region reports very few cases of cholera, but the sanitarians watching the returning pilgrims warn the world before any official reports reach the governments permitting the pilgrims to go to this place. Probably the military arm of Russia knows before the St. Petersburg authorities what is the status of cholera in the provinces. It is the men in the field who discover and take adequate protection against the nidus of the great epidemic. The world owes a great debt to military hygiene.

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In fact, a great weakness in much international hygiene is the fact that it is not *all* under military control. Civil administration has to do with the individual and the rights of property. Civil administration cannot touch hygienic questions except by virtue of the police power. To illustrate: a riot breaks out and at once assumes a very serious aspect. The police, and then the sheriff, and finally sheriff's deputies, in this country, must exhaust their resources before the military arm of the government can be called into play. In cases of dangerous epidemic this is too slow a process. We have straddled the question in the States of the American Union by giving our State health boards a very wide discretion, and even to the extent that the charge has been made that they have executive, legislative and judicial powers in contravention of the constitution. We do not care to discuss this legal question, but it is a serious one, and certain courts have ruled against the integrity of some of these laws. However, we may view the matter as it relates to the States of the American Union, certainly it is very unwise to prejudice interstate and international sanitation by placing it under civil authority.

Among all the advanced powers of the world army and navy administration is all but uniform, while civil administration is most diverse. The Red Cross finds very little trouble in holding a Geneva Convention and having practiclly all of the powers become signatory to the agreements reached. Paris is trying the experiment of forming an international health bureau and the Court of Arbitration at the Hague is doing a great work. It will be a mistake if international sanitation is not made a military function under some such organization as is the United States Public Health and Marine-Hospital Service. Most of the first-class powers have come to such a basis: the rest must do so if we may hope to avoid pestilence such as is the peril of cholera at the present time, especially in Russia and Italy, and bubonic plague in China.

Interstate sanitation I will discuss solely as it relates to the United States. It is but a step from international to interstate sanitation, and it is quite within the range of practicability for the same organization, in any nation, to attend to both divisions of the work. Many of our physicians have been disappointed because the Owen Bill was not enacted into law, while a very militant minority have as strenuously opposed such legislation. From my investigation at Washington it appears to me that there will be considerable difficulty in persuading Congress to provide for a department, bureau, or commission vested with power to do, in the domain of sanitation, what the Interstate Commerce Commission is attempting with the railroads. Fundamentally there is a difference. Public carriers are conducting a business, while public sanitation lays its hands upon individual and property rights, especially as it has to do with nuisances. The Interstate Commerce Commission is obliged to make frequent appeals to the courts and a Department of Health might be even more frequently engaged in litigation. A mere extension of the functions of the present Public Health Service would enable it to do the more imperative work of interstate sanitation. Since neither the Service nor a Department of Health is at present doing this work, the existing status constitutes a weak place in our national health work. Whether the problem should be solved by the creation of a department or by extending the powers and functions of existing organizations is not for me to say. Any such interstate work would have distinct limitations probably not fully appreciated by physicians who do not realize how many rights are granted to the soverign States by the Constitution of the United States. Our medical journals have assumed a range of work for a national department not at all liable to ever be brought to pass unless the Constitution be radically altered, a matter requiring the consent of two-thirds of the States.

As to work within State lines, I have looked over the reports and other recent literature of every State Board of Health in the United States and find most of them awake and doing a good work. But the laws under which they operate and the regulations as to details vary widely. There is urgent need in our State work to eliminate politics and to inaugurate a get-together campaign tending toward uniformity. As it is, most State departments or boards are preening themselves upon the excellence of *their* work and taking little occasion to learn the good points of the work in other States. As a matter of fact, nearly every State board has vitally weak places in its work solved by some other State that, in turn, has its own weak places as well.

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Nevertheless, the State boards are, upon the whole, the most effectively organized of our sanitary service. The problem they face is difficult. Where the work is new and local boards are weak the State must literally carry most of the local work and operate under regulations centralizing the power. But it is a mistake for the State boards to *continue* acting as a sort of crutch after the local boards have had time to become effective.

Every city is standing in its own light unless it provides an effective and well-officered Bureau of Health with large powers of its own. While it is proper for a State board to exercise supervision in detail where the local board is inadequate from incompetent membership, lack of local legislation, or lack of money, a really capable city bureau is best left largely to its own devices. Unless the city gives a proper initiative to its health officers it never need expect to obtain either efficient officers or adequate service. Such cities as New York and Washington have all but model health organizations of their own, but the great mass of city governments are continuing to make a crutch of the State departments and undertaking the impossible task of securing effective sanitation for the city under State regulations necessarily designed for average conditions throughout the State, inclusive of villages, counties and townships. Other branches of public service are not so fatuous. Because the State has an effective national guard does not excuse the boroughs from maintaining a police force. Because the State Appellate Courts have excellent judges is no reason for the abolition of county judges. Because the State has an effective board of health is no more a reason for neglect upon the part of counties, cities, villages and townships than it would be for these units in government to refuse to appoint and pay policemen and judges. Over the greater portion of the United States local boards of health are far from what the necessities of the case demand.

The personnel is a large factor in public health work and a vastly important one. The idea prevails that any capable physician will make an acceptable health officer. This is far from being true. There is a world of detail, not wholly medical, that is vitally necessary for a health officer to know. It is a specialty in itself, and a most complicated one at that. There are a few States and cities providing for a scientific and practical training for the health officer, but they are very few. Some of the universities are now offering adequate courses in preparation for this important line of endeavor. But the fact remains that an essentially weak place in modern sanitation is the difficulty in securing capable men, and then the trouble in securing funds with which to pay them. Society does not capitalize altruism very largely and seldom realizes that it actually pays to do so.

It would seem that the medical profession at large would constitute the rank and file of those advancing public health work. This should be true and will be brought to pass in time. But at present there are two factors preventing the profession from taking their proper place. The first one is that the run of physicians will not, or do not, actually inform themselves concerning the troublesome and complicated details inherent in any worthy health work, and the second one is a very unwarranted caste feeling indulged in by so many sanitarians actually engaged in the work. A large association with these men convinces the writer that the great majority of these men are young, are somewhat involved politically, have usually not actually practiced medicine to any extent, and the conditions in which they find themselves gradually get them out of step with the profession at large. The only way to correct the first fault is for physicians to study sanitation in all of its phases. This involves more or less of sociology, much laboratory method and data, somewhat of engineering, a little law and certain branches of chemistry. The fault with health officers is that inherent in specialism generally and sinks deep in human nature. In a very few of our States the medical societies are consulted when it comes to appoint a health officer. This should be universal. The writer knows of more instances where ward politicians were consulted when a choice was made. Not all politics is corrupt by any manner of means, and medical societies, boards of trade and civic bodies generally would well serve their country and their cities by taking an intelligent place in politics and seeing to it that health officers were appointed upon a basis nearly foreign to the present hit-and-miss method. We should blame ourselves more and the political machines less. The politician and the health officer are largely what we make them. Nevertheless, it is not thinkable that

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a profession advancing faster than any cognate branch of learning will, in the long run, allow itself to be cast down from the place rightfully belonging, not to the few but to the many, in the medical profession.

As to the work being done, most if it is most distinctly encouraging. But we are discussing here the discouraging features. Original sin has been displaced by a host of sins, and original diseases are giving way to new ones. So soon as we win a victory over one affection a new one seems to arrive to take its place. The old black plague is now history, but the same bubonic plague has arisen from the ashes of the past to plague us to-day. Infantile paralysis has suddenly appeared from somewhere. No man can tell where it came from. Cholera seems to be getting a new hold and the sanitarians predict for it great ravages in the coming season. La grippe is a comparatively new disease. The diseases of animals communicable to man and the parasitic affections are claiming an increased number of victims. Nervous affections are on the increase. So, despite the triumphs over old diseases, the fight is one continuous struggle, and the optimists who assert that sanitation will all but eliminate disease would better study history and bear in mind that war and famine and the diseases that follow in their train may frequently be the nights of future history as they have been the dark places of the past.

Sanitation ever brings its dangers. There was a time when Cuba and the Southern States of our Union were full of yellow fever immunes. Owing to the great and winning fight made against this disease, the cases, as well as the immunes, are becoming scarce. Suppose that conditions should arise that this disease be suddenly disseminated over a wide area, it would find virgin ground and might claim its thousands of victims. All that might be necessary is a war in Brazil and a relaxation there of the present efficient sanitation measures. Typhoid fever is a disease much less prevalent than was formerly the case. But the Spanish-American war showed the nation how susceptible to it are our young men. Disease is a strange entity. We fight down one scourge to our orchards or fields and straightway a new one arises or is imported upon nursery stock. Hogs die off from hog cholera for years, this disease disappears and then the cattle contract foot and mouth disease. It seems that travel and civilization disturb the balance of nature, that strange law that heals in one place and scourges in another. No one is prophet enough to tell what a day may bring forth in the matter of communicable and epidemic disease.

There is a present danger that the ultra-scientific views of the leaders in preventive and curative medicine may retard genuine advance. With all deference to the laboratory man, we know that one reads of little but the opsonic index for a while and bacterial vaccines hold the boards. Then that gives place to ophthalmic tuberculin reactions and tuberculin therapy. Then stovaine has its share of professional attention and practically passes out. Now comes "606" for syphilis, Wright's immunizing serum for typhoid and artificially incubating new human tissues in the place of worn-out or diseased ones. But all join in the proposition that the old is bad and the new is good, especially as applied to drugs long tried and that the average doctor uses with better results than do the experimenters with the great majority of their untried and high-sounding preparations made in the laboratory and not by nature. It is not our purpose to decry one single laboratory advance —but the new things all need the tempering conclusions of the men actually practicing medicine. As applied to sanitation, it is well to remember that the physician is dealing with but one sick person at a time, while the sanitary measure may affect the lives and well-being of *many*. We all remember when formaldehyde first came into usage, some enthusiasts claimed that it was so penetrating as to disinfect the pages of a closed book. We know better now, and we also know that the greatest proportion of all disinfection is utterly inadequate. Fads and sensationalism have no place in public sanitation and do harm in the long run.

Finally, like in most phases of present endeavor, men and money are the important elements to be considered. Men are often hard to lead in sanitary matters. Probably the first effort of the sanitarian should be public education. In *this* work the doctors and the medical societies can do much. *Ignorance* is the greatest weakness to be encountered in public sanitation, and accounts for the greatest number of failures. Ignorance of the health officer can be overcome by appointing better officers or informing the present incumbents. It is not so large a problem to educate a few hundred or a few thousand men, but to educate the whole public is a large undertaking. This, the

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public sanitarians cannot do alone. It is especially the province of the physicians to undertake this task. Let us all inform ourselves and then to the work.

403 North Second street.

To THE MEDICAL COUNCIL:

In regard to your query as to what diseases concern the general practitioner most, I should say stomach troubles. Diseases of the stomach, either functional or organic, so-called various forms of indigestion, often erroneously charged up to the liver under the head of biliousness, have given me more trouble to diagnose and treat scientifically and successfully than all other diseases combined. I refer chiefly to the subacute and chronic forms. The diagnosis of any acute trouble is usually easy, as is also the treatment.

Aside from diseases of the stomach itself, it concerns us in practically all other diseases. Through it we have to reach other diseases that require external medicine, and upon its workings and ability to retain, digest and assimilate nourishment we are largely dependent in sustaining our patients through all forms of illness. Therefore, it is highly important that we should know much about the physiological chemistry of the stomach, as well as its diseases.

Laboratory research has not as yet solved all the problems of indigestion, and obviously so, when we note the difference between the subjects of the two classes of experiments (to use the language of Dr. Fenwick), the healthy dog and the unhealthy man.

I have prescribed for more cases of stomach troubles and given the subject more study than any other branch of medicine. I have attempted some analytical work of the stomach contents here in the country, but for lack of time found it quite unsatisfactory. The greatest difficulty I have met in diagnosing the different forms of stomach diseases is to differentiate between chronic gastritis of mild form with organic acid formation, and a true, mild hyperchlorhydia. Of course, when either is an advanced case the diagnosis from symptoms alone is comparatively easy. The next most difficult differentiation is a true hyperchlorhydia from hyperesthesia.

Hypersecretion is rare in the country, I think, but when present is not difficult to determine if well advanced. Ulcer, well understood, presents a few symptoms that are practically pathognomonic.

Kenbridge, Va. T. C. HARRIS, M.D.

The Business Side

OF MEDICAL PRACTICE

While we, as physicians, desire to be scientific students and practitioners of medicine, yet we desire also, for the welfare of our dependent ones and for the sake of our standing in the community, to secure a fair compensation for the services we render to our fellowmen.

Irrigated Land as an Investment.

Nox McCain, in his lecture upon Canada, says: "The three principal objects of the early American explorers were to find gold, the northwest passage or the fountain of perpetual youth." History records the outcome of the two former quests, but it would take a prophet to prognosticate the ending of the latter trail; for men have learned that perpetual youth for themselves is but a dream and they are now looking for such a boon for the land and for its resources.

That "the desert shall rejoice and blossom as the rose" is nowhere better exemplified than in the old arid lands of the southwestern United States. But irrigation in the Colorado desert, the old Spanish domain of California and in the great northwest is an old story and needs but the word of the commentator here.

In the great Imperial valley of half a million fertile acres, but where the annual rainfall is but two inches, irrigation is producing at a cost of 60 cents per acre foot, crops of forty-five bushels of wheat, fifty-five bushels of barley and twelve tons of alfalfa per acre, and from these points down; while fruits and truck yield large returns. Citrus crops in California and hardy fruits in Oregon yield hundreds of dollars profit per acre by virtue of water and the engineer. Many of these lands are profitable investments for physicians who can look after them.

And where the rainfall is twelve inches annually distributed through six or seven months, irrigation is found to be profitable. Even in Alberta, in the valleys of the Bow and the Saskatchewan Rivers, the fertile irrigated land is attracting the sturdy farmer of our western plains and a sister country is profiting by our loss of hardy citizens.

One would naturally think that in the Isle of Pines, where the annual rainfall averages sixty inches, where frost never comes, and where a profit of one thousand dollars per acre of orange grove is possible,

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men would rush in to cultivate the land. Or in Hawaii, where so many advantages are found, or in Florida, the land of winter joys, and in other favored lands where irrigation is unnecessary, why is the soil so slowly occupied? But the Isle of Pines is to us a foreign land. Hawaii is ours, but little American agriculture exists except the sugar and pineapple plantations, mostly worked by aliens. In Florida the summers are not so hot but that our people can readily tolerate them, but the insect life and the large outlay so often necessary for fertilizers keeps the settler away despite the fact that irrigation is unnecessary.

It is undoubtedly true that intensive agriculture and horticulture upon irrigated land is most profitable to experienced men who can command a ready market for their products. Set opposite to this is the fact that the operation of business law and adjustment of prices has so advanced the price of suitable land as to yield a fair percentage of profit only under good management.

Five hundred dollars per acre is a common price for such land. Add to this the high rates of interest, the cost of water, the high price of labor, the heavy freight charges to market and the ordinary expenses incident to intensive cultivation, and one is confronted with a total rendering the proposition hazardous to the amateur or to the man of small resources. But the frequent failure of these individuals does not in the least detract from the fact that small fortunes are being made by experienced growers who have placed their projects upon a sound business basis.

One cannot be blind to the fact that the engineering difficulties, the distance to an available water supply in many cases, and the cost of upkeep of the large irrigation plants ties up a very large investment of capital that may come back very slowly. Also land speculators and expensive promotion schemes all tend to discourage the entrance upon this land of new people. Were not this the case the production of western fruit and other products would soon outstrip the available market.

An Eastern man will the more readily understand the cost of water in the Western country by giving meter rates. In nineteen California cities the meter rates for domestic water ranges from 20 to 65 cents per thousand cubic feet. In a few favored cities it is as low as 11, and in one instance 10 cents, while large consumers pay 6 or 7 cents. The smallest price lately quoted is 4 cents delivered to a local distributing system which, in turn, charges 6 cents.

When one remembers that the annual rainfall in these regions is from one-fourth to one-half of that found in the Eastern States, the amount of water used in irrigation is very large and costs from one and two dollars upwards. Add to this the labor cost of irrigation and the total cost per acre is from five dollars upward in the average year. Some farmers are so fortunate as to sink steadily productive wells from which they pump their own water. It must be remembered that wells are not plentiful in most Western communities and the small streams go dry during the summer. Many old residents of the dry country are astonished when they visit the Eastern States to note the amount of summer water allowed to go to waste, as they view the matter. And it is true that the East is blessed with a large and well-distributed water supply. Eastern people who have never visited the Western coast fail to appreciate our blessing of water and have little conception of the value of irrigation.

For the benefit of such readers and to point the moral this article will attempt to make, it will be well to give some facts relative to crops in the irrigated arid lands. First of all, these arid lands usually are possessed of good soil needing only the touch of water to produce good crops. There are also old range lands and, in the central land of the California valleys, wheat lands cut up into small tracts and offered for sale by the irrigation companies. This wheat land has been sometimes pretty well farmed out and needs heavy applications of fertilizers.

Ignoring the statements of promotion literature, but which is more truthful than comprehensive, a study of the crop reports and personal inspection of the irrigated regions will reveal the fact that the whole course of nature is not turned aside by irrigation. Really, irrigation is in its infancy and a comparatively small proportion of the total arid land is under irrigation. The staple crops are of first importance in all of the States and truck growing and horticulture, even in such States as California, are but a small part of the total of agricultural enterprise. Corn and cotton are our two most important crops. Corn does not do well where the season is short nor

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where the summers are very dry. Irrigated corn is not much of a factor, and the growers of corn in the dry belt find it difficult to compete with the real corn country. Cotton is being grown successfully under irrigation, but it is not yet demonstrated that it is a commercial success. Railroads charge two or three times first-class rates to carry cotton, which is too inflammable and is regarded as hazardous freight. Where cotton has water outlet to market it can be profitably grown, but in Arizona and in Imperial County, California, the freight carriage reduces profit to a point rather discouraging to the grower. A new cotton-picking machine promises well and it is altogether likely that the old South will maintain its supremacy as the cotton belt. New railroads projected may ease the freight situation for the new districts, however.

An exception as regards corn must be recorded. Large sections of reclaimed land are operated without the extensive breeding of meat animals. Indeed most of these sections do not produce enough meat to supply their own needs. Alfalfa is satisfactory for the dairying interests, but to profitably fatten cattle and hogs for market requires a good supply of cereals and, especially corn. Even though the general corn market will probably be but little supplied from the irrigated land, it pays in many sections to produce a supply for local needs and it will undoubtedly pay in future to raise more corn for feeding. Meat is high in price in these sections and it is all but an economic necessity that they further develop their local corn crops.

A study of recent crop reports will justify classing corn and cotton ahead of wheat, although wheat must not be allowed to decline in yield if we wish to maintain our status as a nation. Despite the importance of rice to the Orient, the Oriental people are becoming by preference rather large consumers of wheat. Unfortunately, large areas of irrigated land are not adapted to wheat, since it is a crop drilled in and raised without the cultivating usual with other crops. Irrigating wheat is apt to leave the land baked and cracked upon the surface, and while, with some soils, this does not markedly occur, with those in question the wheat does not do well. Consequently dry farming will probably add more to the wheat acreage than will irrigation.

Barley is a crop that matures more quickly than does wheat, and is profitably raised upon land where the wet season is short. Hence, irrigation does not promise to be much of a factor with this cereal. Oats do not promise well raised by the newer methods and we can ignore it here. As has been shown by recent articles, rice is becoming an important American crop where the subsoil is not porous and holds surface flooding with water as it does in Arkansas. Experimental plantings have been made in the central valleys of California, but the industry is too new to be established upon a commercial basis.

It is in the growing domain of horticulture that irrigation is establishing itself the most firmly. While in large sections of Oregon, apples and grapes are not irrigated, further down the coast they must have an artificial water supply or be grown in the high land. Citrus crops and many minor fruits are made possible in the Southwest by irrigation and are affording a highly profitable industry. Notwithstanding this, raisins, prunes and olives are not so profitable as one would expect. The fig native or of long standing in California is not of a quality sufficiently high to displace the Smyrna fig. But this fig is being introduced successfully by men who are willing to take the trouble to cultivate the male fig and the fig wasp that pollenizes the female trees. Thus far the acreage is small.

Eastern people note the absence of timothy and the clovers upon irrigated lands where alfalfa is king. But the alfalfa hay production threatens to exceed the demand unless much more stock is raised to consume the product at home. Shipping it away too freely impoverishes the soil.

Men from many regions will probably call in question some of the statements that have been made, but a general survey is intended here and conservative students of the whole area of reclaimed lands and the general crop reports largely bear them out as regards present conditions.

There can be no difference of opinion as regards the value of irrigation in the raising of garden truck and a commercial supply of seed. The latter industry is rapidly being largely removed to sections where sunshine ripens the seed and where water can be supplied without rains and wind beating down the mature plants.

If the theories of some of the astronomers be accepted, the planet Mars is an instance of the whole food supply of a

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world being dependent upon the irrigating canal. And yet we would not like to be placed in such a dependent condition, even though it might testify, as it is supposed to do, with the Martians to the intelligence and resource of a people driven to extreme. Certainly the need for irrigation and intensive farming is making a scientist of the modern farmer, and it is an encouragng sign of our time that the difficulties of living are making better farmers and more intelligent citizens. *Ad astra per aspera.*

It will be well for the East to pattern after the West in all things wherein the West has excelled, and the East is gradually doing so. The Oregon apple has been a revelation to many Eastern people, who are beginning to copy the Oregon methods. The writer has recently attended three apple shows, exhibiting respectively fruit from Oregon, Pemsylvania and North Carolina. Were he an official judge to decide which State should have the blue ribbon, he would be placed in considerable difficulty. But it is to be remembered that scientific methods and intensive cultivation are quite as much of factors as are irrigation.

But intensive agriculture in the East has been too one-sided. This is one reason why it often fails. Take a trip through the potato-growing section of Maine and one must be impressed with the lean animals, the wretched milk supply and the lack of other crops necessary for local consumption. Potatoes have been too long grown upon this land and rotation is seriously needed. The same can be said of certain onion and celery-growing regions in other States. Irrigation will not solve any of the questions arising from unwise handling of the soil.

As has been indicated, irrigation will not solve any of the difficulties of the Eastern farmer of staples with the possible exception of some few corn-growing planters and those who may attempt to raise alfalfa. Even with these crops it is doubtful if a commercial justification exists for irrigation.

But the East is beginning to irrigate truck and berries, when needed, and to pattern after Western methods of culture and marketing. This will bring down some fancy Western prices. On the other hand, the whole country now produces only about twenty-five million barrels of apples annually, while as far back as 1895 there were sixty million barrels produced. The falling off is largely due to scale and other pests.

These agricultural and horticultural considerations will permit any physician to figure out for himself whether or not it will pay him to invest in Western irrigated land. But it is well to call attention to the fact that there is no royal road to wealth in irrigation, and upon such an acreage it is even more important for the owner to be on hand than it is with land in the East. One can lose money upon badly managed irrigated land more rapidly than is possible upon other or cheaper land. With proper management, irrigation is highly profitable, but one must be as careful of his real and continued title to water as he is to the land itself. Many purchasers of land "with water rights" really buy a law suit and fail to get the water which alone gives the land value.

Promotion literature exploiting irrigated lands is reaching the physicians. Much of it is truthful, but it is hard to discriminate. The Western chambers of commerce issue fairly conservative literature and are in position to recommend reliable real estate dealers. By far the best plan is to go and see and let no one know you have any idea of investing until after you have looked around for yourself. There are plenty of pitfalls in handling irrigated land, but discriminating purchase of such tracts offers one of the surest of reasonable profits, provided the selection, planting and care have been proper and unremitting.

How They Work.

How the mine fakers work is shown in the following letter from George Graham Rice, the head of Scheftels & Co., of New York, the firm that sold Ely Central and other fake stocks, to Nat Goodwin at a time when the actor was contemplating a trip to Europe to sell stock:

We have only got an eight-foot hole down on the Bovard mine, and you could not get any engineering report on the property except that it is a promising prospect. I do not need anybody in Europe or America to sell real mines for me, nor does anybody else.

"Any time we have the ore blocked out we can put up our own mill and make all the profits ourselves and if the property you take along with you has got to stand such an examination as school-trained engineers are apt to give it, it is folly to monkey with it. There are two kinds of ore blocked out in the Rawhide Coalition, and yet we could not sell it at 35 cents per share, and the property was turned down in cold blood as merely a prospect by engineers.

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"My idea was that you would be able to pull off something like ——— did over there. He did not take a *mine* there, but a *stock prospect*, and fed it to them. He gave dinners and banquets, and cut a wide swath, and then had them underwrite the whole capitalization of one of his companies."

The Business Side of Practice.

EDITOR MEDICAL COUNCIL:

One of the best features of your journal is the Business Department. Judging from the large amount of circulars of mining companies, fruit farm land schemes, stock and bond propositions with which I am pestered, I judge that physicians, as a class, have been, and perhaps are, easy-marks for promoters. We are very accessible, because our names are in all the directories and we have office hours, and never know whether our callers are prospective patients or drummers.

As to collections, I have tried several plans, but find that the best is to send statements regularly and, if not responded to, I give them to my collector, who attends personally to the collections. My practice is essentially a neighborhood one, and by sending statements and giving the accounts to my collector before they become too cold, the deadbeats learn that I want my money and they do not increase their accounts. If one gets a reputation for being very kind people will impose on him until patience ceases to be a virtue. A colleague of mine, when he began practice, responded to every call, was very busy and piled up a stack of accounts. One time he went seventy-two hours without sleep, and when he considered how little pay he received for those sleepless hours it set him to thinking. He got busy with his collections, sued some of the delinquents and people said, "Dr. K. is a good doctor, *but* he wants his money." After that the amount of his practice fell off, but the net results were better, and he has time to use his microscope, write up the history of every case, and give his patients the benefit of laboratory diagnosis.

I observe that when any workman or tradesman does any work or sells me any thing he wants his money C. O. D.; but the same man will let his physician's bill wait, especially if the doctor permits him to do so. We have, as a class, been too easy with our patrons.

E. P. S. MILLER, M.D.

2001 West Lake Street, Chicago, Ill.

The Southern Nut and Fruit Company.

(A Correction.)

In the remarks about investments in this department it is our desire to do good always and never to harm any legitimate enterprise. If we ever make a mistake it is unintentional.

In our February issue an opinion was expressed by Dr. M. L. Chadman, of Lancaster, Pa., regarding the literature received by him from the Southern Nut and Fruit Company, World Building, New York, N. Y. The Doctor wrote us that his opinion was based upon his own experience in raising pecans. However, he may not have been working under as favorable conditions as those provided for by the company in question.

We have made investigation regarding the company, and believe that they are honest and conscientious in the work they are doing.

The company was started, as we have so often stated was the proper way of conducting such a business, by a few friends, well known to each other, buying a tract of land and employing one of their own number as manager of the work of planting and cultivating.

The president, Prof. Judson P. Welsh, was for sixteen years principal of the State Normal School, Bloomsburg, Pa., and afterward dean of the Pennsylvania State College. He is a scientific student of agriculture. The other members of the company are also men of high standing and character.

The soil on which their orchards are being planted was carefully selected by a representative from the United States Bureau of Soils, Washington, D. C., as the most suitable that could be found for the purpose of cultivating pecans.

The orchardist in charge of the work is Mr. J. C. Britton, a trained horticulturist from the United States Department of Agriculture.

They are developing this property for themselves, but, having a larger acreage than they expected to cultivate for themselves, they are offering the surplus for sale in five-acre orchards.

A physician wishes us to inquire, through THE COUNCIL, what is the custom of our readers on the following points:

First—In an obstetric case, how many calls do you usually make after the confinement?

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Second—What do you charge for the confinement?

Third—What are your usual charges for ordinary calls?

Investment Precautions.

If possible, take a trip to the mines, oil fields, plantations or other investments offered. Investigate, learn all you can; ask pertinent questions; an honest agent will welcome them; don't be afraid of his feelings; don't invest yet; come home, let the glamor wear off; investigate some more.

Don't invest in any enterprise what you cannot afford to lose or the lack of which may cause suffering or want to others.

Learn what proportion of the wireless, oil, rubber plantation, mining, and other stocks offered to the public in the last twenty years, have made good.

Don't invest in any stock where you are not sure that the promoter will be able to raise the full and necessary amount of money needed to place the enterprise on a paying basis, for no matter how good the project is, it will take plenty of money to develop it, and if the promoter raises only half the required amount you surely lose.

The fact that there are good responsible business men in the company does not always guarantee its success. They may have been fooled or got their stock for the use of their names.

Don't invest in promoters' stock unless the treasury stock is underwritten by a responsible house. The treasury may be empty and your money used for printing or board bills.

Learn whether stock companies have bonds outstanding or other indebtedness which must be paid ahead of dividends.

Investigate the guaranteed stock and learn that the guarantors are O. K. Get written signatures to as much information as possible.

When you buy stock get it from a reliable person or firm, see that it is genuine and made out in your own name, or have it transferred to you by the company's secretary, so that your name will appear on the company's books, and you'll then get reports as they are issued, likewise dividends "when they are declared." Registered stock is the safest, as that is supposed to prevent overissue.

Demand your stock delivered to you promptly; then it can not be used against you to bear the market.

Publicity as a means of securing and retaining the confidence of one's stockholders is always appreciated. Secretiveness invariably gives rise to suspicion.

To have a friend in the mining business, unless he is well posted, is often the beginning of a bitter acquaintance.

Never promote a get-rich-quick project and expect to keep your friends.

Some questions to ask the promoter:

From whom did you obtain my address?

What is the present business of your president, secretary and treasurer?

How many of the officers are on a salary, and what salary?

What is the capitalization of the company?

How much stock in the treasury, and how much cash?

What sort of titles have you to the claims?

How far are the claims from railroad facilities?

Why don't you ship your ore to get money for continuing shaft?

How much money have the officers put into the prospect?

When and under what laws was company incorporated?

How much debt has the company?

Has the stock been listed on any mining exchange? If not, will it be?

How far is the mine from milling and smelting facilities?

Have you any reliable engineer's report as to values?

How often will stockholders receive reports as to proceedings?

What references can you give that will aid investigation?

About how many stockholders have you now?

Who are the six largest stockholders, and how did they obtain their stock?

Some Don'ts for the Doctor.

Don't be slow in your attention to your patients!

Don't spend too much time with your patients. Get your case history, make your diagonsis and institute treatment, and leave, if on a call, or invite in your next patient, if in the office.

Don't visit with your patients when calling on them in a professional way, as you may innocently drop some remark which may mean a loss to you in the future.

Don't make your office the resort for all of the town loafers, either during or after office hours.

Don't tell your wife all about your cases, as she may not understand all the particulars and may tell the neighbors things which will act to embarrass you.

Don't treat patients on the street or in public places.

Don't tell your patients what medicines you are giving, as the effect is all that they need know anything about.

Don't make the saloon your loafing place, for if you do not imbibe you may be accused of so doing if you hang about such places.

Don't try to be too dignified, as false dignity is worse than none.

Don't antagonize the children. They are the doctor's best friends.

Don't do anything which any other decent man would not do and you will meet with success.

G. L. S., *in Physicians' Business Journal.*

All medical service corporations advertising to furnish subscribers with medical attendance are doing so in direct violation of the law as enunciated by the highest court of this State and can be promptly closed up if the county society of the county in which the corporation exists has the slightest conception of its duty to its members and the profession at large and a spark of courage. Any medical service company offering to furnish physicians to subscribers is violating the statute and its officers are guilty of a misdemeanor (N. Y. Rep. Vol. 198, p. 48).—A. T. B., in *New York State Journal of Medicine.*

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Obstetric Fees.

By M. CASPER, M.D., in
The American Practitioner and News.

Physicians are agreed that the fees in obstetric cases are entirely inadequate. Compared to the fees in other cases of practice these fees are ridiculously small. They have not increased in years, though if done well and scientifically the practice is far more difficult than formerly.

In the first place, families are smaller now; formerly it was not a hard matter to find families of six or seven children, but now one or two children make up the majority of families. We are all aware of how much more tedious and more difficult it is to handle the primipara than a patient in her second or subsequent confinements; they take much longer and, being entirely ignorant of such things as well as anxious and often alarmed, are more exacting of the accoucheur. Obstetric cases must be given precedence over all others, even over our own health by breaking our rest at all hours of night, also causing us to lose other calls and miss our office hours and appointments. The responsibility is also greater now than formerly, nor is there a class of practice in which a physician is more subjected to criticism and even violent slander and loss of prestige. We can all call to mind instances where some physician has suffered unjustly in loss of practice or otherwise from some unavoidable complication, such as puerperal sepsis, lacerations and many other complications to mother as well as to baby.

Now what do we get for all this? Fifteen dollars is the rule, it seems.

Some say, "Well a midwife will do it for $5 or $10 if I don't." Let them; they have no reputation to lose and they have time to burn. "But Dr. Ketchum will if I don't." Ah, here is a real stumbling block. We all are fully aware of the fact that the profession unfortunately contains a few of this class, and that is the reason that we should act together. Until such a time as we may be able to get together on matters of fees and other vital business connected with our profession, the following plan is offered as a partial solution to the question:

We must first change the whole basis of charges in obstetrical cases. It is wrong to take a labor case at a fixed charge, and that charge too low in the beginning. We would scarcely take a case of pneumonia or other disease at $15. A doctor that does much obstetrical work can scarcely ever find a time when he is not under obligations to stay in the city, either looking after after-treatment or expecting some case, a responsibility that cannot be estimated.

In the practice of obstetrics, a printed form of instructions to enlighten the prospective mother is a valuable asset and saves much explanation and gives us more sanitary conditions when the confinement arrives. We can emphasize the importance of precautions, urinary analysis, cleanliness and many simple rules, etc. Also state in it the importance of anticipating the doctor's fee or a substantial part of it. Our charge should be based on responsibility, time lost, and services rendered. Of course, responsibility is much greater where you deliver a future President or future millionaire; charge accordingly. Time lost should be reckoned by the hour. Common sense tells us it is worth more to wait on a woman that is twenty hours in labor than if our service consists largely of idle waiting.

Some charge $5 an hour, and that is a reasonable basis. Urinalysis should be thoroughly made and charged for. We may save the husband funeral expenses later on by care in urinalysis, and certainly that should be worth something to him in a business way, besides the sentimental side of it. Many throw in a week or so of daily visits. Now that is an injustice to the doctor who practices it, and competition almost requires it of most of us. After-care is necessary and important, but we should not be expected to give our time, advice, etc., for nothing. Surgical attention or forceps delivery, repairing lacerations, necessary special work call for special remuneration. Your tailor don't patch your coat free just because he made your suit; why should we sew up a tear free? A stitch should be worth $5, a surgeon later on would charge $25 or more for it. Forceps not only require special skill, but carry added responsibility. Hence we should be well remunerated for this operation.

The great idea after all is, if you do this work you should do it well, and you can't buy rubber gloves and dozens of other requisites unless you are paid accordingly. When asked what your charges will be, say, if you must, $15 *and upwards,* no less, but more according to trouble, complications, etc., and don't be afraid to say that you ex-

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pect it to be cash, for those who expect to pay can raise the money before as well as after confinement and will not be offended if they had intended to pay. If it is charity all well and good; we must care for deserving charity, but we should know if it is not, and save our collateral sole leather.

A sample charge itemized: $5 for five urinalyses, $5 for one hour's actual attendance, and $5 for after attendance; $15 total. Now that really looks cheap, doesn't it? Yet that is a sample case with no complications or heartaches, and a kind that none of us would object to attend.

Another itemized: $5 for five urinalyses, $15 for three hours' sleep lost, and $6 for after attendance; $31 total fee; a fair charge, isn't it?

Dr. Obstetrician, wake up and answer, why does Dr. Surgeon ride in a big automobile while you still drive the old gray mare or even walk, perhaps? But we can all get better fees, so let the slogan be "we can and we will."

BEST IDEAS FROM RECENT LITERATURE

Spasmodic Respiratory Affections in Early Life.

With special reference to diagnosis and treatment a group is made of all the corelated affections that are marked by reflex spasm of some portion of the upper respiratory tract or bronchi, by Dr. G. R. Pisek, New York City (*Post Graduate*, May, 1910). These conditions have been denominated the *spasmophile diatheses* and are characterized by a constitutional anomaly which is recognized by a measurable mechanical and electrical overexcitability of the nervous system, which produces a pathological predisposition to certain partial and general clonic and tonic convulsions.

The group, it is shown, includes practically all spasmodic respiratory affections, excepting those caused by specific infection or purely anatomic lesions. The spasmophilic conditions are laryngospasm, tetany, eclampsia, spasmodic laryngitis, spasmodic tracheitis, and bronchial asthma. They are the result, directly or indirectly, of exaggerated irritability on the part of the nervous system. More than that, they exhibit the same hereditary factors and in many instances there is a direct homologous transmission from the parent to the child. They are most often found in rachitic children, or at least in those that have suffered from disturbed chronic metabolic processes during their period of growth and development.

In every instance there is an unstable nervous equilibrium, hence minor causes produce great irritation, the power of inhibition being correspondingly low. That is why adenoids or enlarged bronchial lymphnodes may cause bronchial asthma.

Laryngospasm is not infrequent in infancy. There is danger of confounding the condition with congenital laryngeal stridor, spasmodic croup, tracheal spasm or the spasmodic condition invariably found in pertussis. In laryngospasm we have a prolonged audible inspiration, accompanied by a sinking of the larynx, with an inspiratory crow, or stridor, which has provoked into activity all the accessory muscles of respiration. The expiration which follows, with a raising of the larynx, is gentle and quiet.

Congenital laryngeal stridor is distinguished by the fact that it occurs in the first few weeks of life in otherwise healthy children. The dyspnea is not marked in degree, while the stridor is almost constantly heard. Occasionally edema of the larynx or a retro-pharyngeal abscess causing dyspnea through mechanical action must be distinguished from laryngospasm. Bronchial asthma is frequently accompanied by chronic eczema.

In the question of diagnosis of diphtheritic croup, the suddenness of the onset, usually at night, the spasmodic character of the dyspnea, with only a mild grade of inflammation, in which remissions occur, will be of assistance in the absence of the laboratory test. The spasm of non-diphtheritic laryngitis can be relieved by a momentary inhalation of chloroform, but persists if there is a membrane.

Bronchial asthma occurs in infants and children more frequently than one would infer from the literature. The children of asthmatic or so-called rheumatic parents, are particularly predisposed to this spasmophilic tendency, and if there is present any focus of irritation in the upper respiratory tract, as an adenoid vegetation, the attacks are more frequent and severe.

Rickets, previous pulmonary diseases, and especially pertussis, increase the susceptibility. The history of many of the young

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asthmatics shows them sufferers from dermatoses.

Accepting the spasmophilic theory the indications for treatment are two-fold: (a) Relieve the spasm; (b) remove every source of irritation.

The antispasmodics which have proven most effective in my hands in children are antipyrine and the bromides in combination. Two grains of the former to three grains of the latter, given every three to four hours for a few doses (depending on the severity of the attack) to a 2-year-old child, will produce results and cause no depression worthy of note.

In spasmodic conditions of the bronchial muscles a 2.8 per cent. fluoroform solution, given in dram doses every two hours in the intervals between the attacks, will be found to lessen the severity and frequency of the asthmatic paroxysms. Laryngospasm is ameliorated by small doses of the bromides until the underlying condition can be cleared up. In spasmodic laryngitis the old method of giving ipecac until emesis is produced cannot be improved upon. Small doses of tartar emetic, gr. 1-100 with ipecac, gr. 1-20, should be given during the day to abort another attack. Steam inhalations are soothing but hardly necessary.

After all these measures have been carefully outlined and followed, they will prove ineffectual for a complete cure until, firstly, the child learns to breathe properly (and this means systematic gymnastics of the lungs); and, secondly, arrangements are made so that the child may live an out-door life in a pure atmosphere.

Pylorospasm.

Pylorospasm is defined as a convulsive contraction of the circular musculature of the pylorus, usually secondary to disease of the stomach or other abdominal viscera, according to Dr. John J. Gilbride, of Philadelphia (*American Medicine,* February, 1910).

He finds the condition most frequent in gastric disease associated with hyperchlorhydria, acute and chronic gastro-succorrhea, gastric and duodenal ulcer, etc. Common exciting causes are rapid eating, indigestible food, coarse morsels of food, too hot or too cold food or drinks, strong spices, etc.

In uncomplicated hyperchlorhydria pylorospasm is probably a rare affection. In the associated hyperacidity cases the excess of acid may be due to free hydrochloric acid or to organic acids. But pylorospasm occasionally occurs in conditions of subacidity or in anacidity. Less frequently it is associated with cancer of the stomach, pancreatitis, cholecystitis and chronic appendicitis.

The most prominent symptom is a cramp pain lasting from a few minutes to several hours, and recurring every few days, or weeks, or only a few times a year. The pain may disappear suddenly or shade off gradually. Pylorospasm is of interest chiefly in diagnosis. Cure is effected by removing the cause. Thus surgical drainage of the gall bladder and removal of the appendix have been followed by perfect recoveries.

Calcium Treatment of Twitching Eye Lids.

Prompted by the theory of Loeb that calcium has the power to control muscular contractions, Dr. Theo. C. Burnett, Berkeley, Cal., treated a case of blepharospasm with calcium chloride (*Journal of Ophthalmology and Oto-Laryngology,* Jan., 1911). The patient was a college student and had suffered from rhythmical contractions for months. After about two weeks the drug was discontinued on account of its bad taste and irritant action. However, improvement had begun early and continued till the twitching completely ceased, a few days after treatment was discontinued. At the time of reporting the case the student had been free from twitchings for about five months, although she had continued her studies and, what is more, passed through the ordeal of the mid-term examinations. In every other particular, including refraction, the eyes were normal.

The author submits that a single case proves but little and calls upon other practicians to try this treatment in similar cases and report results. It is to be remembered that calcium is slowly absorbed and slowly eliminated, hence the possibility of continued action after administration was stopped. Again, though theoretically useless, yet in practice the lactate is the best calcium salt for internal administration. It oxidizes so readily that its effect in throwing the calcium out of commission is probably thus rendered nil. A more agreeable calcium preparation for clinical use than we now possess is very desirable; for it is the ideal treatment of spasmodic affections of this type.

Calcium has been successfully employed in tetany, both spontaneous and post-operative.

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Nervous Symptoms of Arteriosclerosis and the Removal of the State Causing Them.

By Tom A. Williams, M.B., C.M. (Edin.), Washington, D. C.
Member Corresp. Soc. de Neurol. de Paris; Member Corresp. Soc. de Psychol. de Paris; Member Assoc. Soc. Clin. Med., Mant., France.; Neurologist to Epiphany Free Dispensary.

Not in all persons is the blood pressure much raised by the toxins which sclerose the blood vessels.

In these cases the earliest signs are often those of perturbed "nerves."

Thus, in a man of 64, having disregarded a matutinal insomnia, a sudden epileptic attack after working at a high elevation was the first signal. Four of these occurred within two months. The blood pressure never exceeded 180. The only indices of cerebral lesion were slightly unequal reflexes and a lessened sense of attitudes in the left hand. Incipient sclerosis of vessels of right sensori motor area having been diagnosed, he remains well twenty months later as a result of a diet of low protein content to subdue the toxicosis which was believed to be the source of the disorder.

A physician of 68, after a year's grief and worry, slept badly, had paresthesia in hands, feet and hearing organ. He took narcotics increasingly. He lost weight and power of endurance. His optimism was replaced by dullness or distress by turns, and he wept much over his griefs. No objective change of reactions of nervous system were revealed by examination.

But sclerogenetic toxicosis was diagnosed from the matutinal nature of the insomnia, the paresthesias without sensory changes and the loss of endurance. A diet low in proteins and purins led to disappearance of unpleasant symptoms. He remains well two years later.

But it is not only in the aged that the syndrome ocurs and can be removed by these means.

Metabolic Psychasthenia.

An engineer of 38, a powerful, energetic man, formerly accustomed to active work, began to be unable to concentrate upon the office work to which he had confined himself for over three months. Previous to this he had been much less active, and latterly he had been very much worried by an official inquiry into a contract for which he had been mainly responsible. For no cause known to him, he feels a dread in the mornings, and an indecision in business matters is now realized to have been present for several months.

He had been improved by three weeks in the woods, during which he was very somnolent, but relapsed at once upon return, and could hardly stand his morning suffering. There was no insomnia.

The reflexes were rather active, but there was no other objective change in the lower neurones. There was no amnesia, the sexual hygiene was normal. He was much depressed, and longed to go away from it all for a year, which he could well afford to do.

He was sent for three weeks into the mountains. This time he fully recovered. on account of the light diet which he took. Breakfast and supper were fruit and milk. and his midday dinner was vegetables and six ounces of meat; after a few days cereals were added morning and night. He is now at the head of a large business demanding much office work.

As prevention excels cure, such results are better than that obtained by removal of effects by baths, electricity or chemical eliminants (diuretics, sudorifics, purgatives), or antagonists (iodides, nitrites), or, still worse, narcotics, hypnotics or calmatives which only mask the disease while it progresses.

Tonsillar Origin of Rheumatism.

It was upwards of twenty years ago that the question was first raised as to the probable causal relation of tonsillitis to articular rheumatism. This appeared in the German military report on sanitation. At once the matter was taken up here and there with valuable results following. Notable among these practicians is Dr. Paul Schichhold, who reports (*Muench. Med. Woch.* February 8, 1910) seventy clinical cases, in the majority of which pus-pockets were found in the tonsils, although in several only after repeated examinations.

Guerich, another worker along this line. not only demonstrated pus in the tonsils of rheumatic patients, but permanently cured ninety-eight cases out of a total of one hundred and twenty-five by the tonsillar treatment. He centends that tonsilitis does not form the beginning or primary lesion of articular rheumatism, but that the latter affection is produced through pus from the tonsillar crypts entering the blood.

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Under the tonsillar treatment the acute symptoms diminish almost immediately, and the patients steadily improve, except for a slight "reaction" on the second or third day, which, however, lasts only a day or two.

Schichhold has seen not only acute cases of articular rheumatism healed promptly and permanently by removal of the tonsil, but he has also seen recent cardiac complications disappear. He concludes as follows:

(a) The cause of so-called rheumatic diseases lies in the pus which fills the tonsillar crypts and which may enter the circulation and produce specific symptoms. Aside from the tonsils other organs may become the origin of such diseases if they are the seat of pus collections.

(b) A complete cure, and especially the prevention of relapses, is possible only by the completest removal of the tonsils. All measures which result only in partial removal, especially tonsillotomy, are entirely useless for securing permanent relief.

(c) Aside from the ioint affections, complications are also influenced favorably; cardiac complications, however, are only thus affected if of recent origin.

(d) Tonsillar treatment appears to have a favorable influence upon other diseases in which enlarged tonsils are found, especially on kidney diseases.

Cough of Phthisis: Treatment.

Unfortunately, there is still operative a lay notion that cough and consumption are synonymous; that no cough means no consumption and that the degree of the cough is indicative of the severity of the consumption. And it is doubly unfortunate that this misleading idea is still often acquiesced in, tacitly, perhaps, but for this reason none the less misleading, by the family physician. The fact is that pulmonary tuberculosis does not in itself produce much cough, and a fatal invasion may have practically no cough.

It is a frequent source of surprise how very much tuberculous infiltration there may be in lungs without a reflex disturbance strong enough to produce a cough. When the process causes cough the invariable indication is that there is broken-down tissue to come away, hence the cough is profitable. In a lecture on Tuberculosis, Dr. George F. Bunler, of Chicago (*Journal of Clinical Medical*, June, 1910), has the following relative to treatment:

Rest and mental control are ordinarily all that are needed to check excessive cough. In the case of many the mere assurance that he need not hack, that he has it in his power to control, is sufficient. In others the combination of suggestion with certain sedatives, such as small doses of heroin or apocodeine hydrochloride. The latter, being slightly laxative, is not suitable where there is looseness of the bowels. The cough most allied to that of hysteria and neurasthenia yields best to mere suggestion, but it must be remembered that the phthisical cough is more serious than the neurotic because of its frequent objective origin and serious consequences. The former may, and often does, arise from the rupture of blood vessels.

When the cough of tuberculosis demands medical treatment the following, in pill or capsules, acts well in many cases.

R Codeine sulphate ..... 1-67 gr.
Emetine ..... 1-67 gr.
Aconitine ..... 1-200 gr.
Hyoscyamine ,amorp.) ..... 1-1000 gr.
Ft. One dose; to be taken every half to two hours for full effect.

Sweet cough syrups and mixtures are best avoided, since they are so apt to upset the stomach and impair the appetite. Flick has shown that diarrhea in tuberculous patients results from renal insufficiency and not from intestinal tuberculosis. When this complicates a cough requiring drug treatment herein, codeine and Dover's powder often act excellently.

A marked bronchorrhea with sticky and adhesive secretions requires stimulating expectorants—emetin, senega, lobelin, ammonium hydrochloride, etc. These are most effective in various combinations, but a nauseating effect is to be avoided.

Practical Venereal Prophylaxis.

All sanitarians will agree that efficient preventive measures against venereal diseases would be a great blessing to mankind. The would-be moralists stand in the way with their claims that a knowledge of such measures would encourage licentiousness. Against this we put the sufferings of innocent wives and children, which will outweigh it a thousand-fold. In fact, will make such a puerile claim dwindle into insignificance.

The most practical prevention against syphilis has proven to be the thorough application to the glans penis, prepuce and into the meatus of an ointment containing 144 grains of calomel to one ounce of lard, wool-fat or other ointment base, within a few hours after a suspicious intercourse.

For protection against gonorrhea various silver salts have been employed. By far the best preparation of silver now available for this purpose is the milk of the iodide of silver, known on the market as Silvodide. The others are irritating and give an ugly dark stain to the clothing and the skin. This is soothing, cleanly and very efficient. It is used pure, as a local application to the glans and prepuce, and injected into the meatus, after the ordinary cleansing with soap and water.

Washing with bichloride solution and other such severe measures are altogether unnecessary.

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BOOK REVIEWS

Public Hygiene. Thos. S. Blair, M.D., Neurologist to Harrisburg, Pa., Hospital. Author of "Handbook of Materia Medica." 2 vols, 644 pages. Illustrated. Cloth. Price, 2 vols., $10. Richard G. Badger, Boston, Mass.

The readers of THE MEDICAL COUNCIL have for several years been acquainted with the practical character of Dr. Blair's work. He has contributed a number of articles to this journal which have attracted wide attention. Also his work upon Materia Medica was very well received, which is attested to by the fact that orders are still coming in for it although the edition was long since entirely sold out.

The work before us was planned by the Harrisburg Academy of Medicine, and after careful consideration of many possible candidates, Dr. Blair was selected as the one best qualified to prepare the work. He has produced the most comprehensive as well as the best work upon hygiene that has yet appeared. We predict that it will be the standard authority for years to come. In his work he has been assisted by a large corps of contributors, each one dealing with some specialty.

So thorough has been Dr. Blair's probing for facts and information bearing upon the subject of hygiene and sanitation that he seems to have penetrated the deepest recesses of human habitation, activity and endeavor. The wonder is that one man could get together such a work involving such a vast mass of related facts within an ordinary lifetime. To quote the different titles treated will give but a faint idea of the work, as the treatment under each title seems to amount to almost a complete treatise of the subject under consideration. The following are the chapter headings:

The Family vs. The Community. Hotels, Lodging Houses and Public Buildings. School Inspection and College Sanitation. Penal Institutions and Hospitals for the Insane. Maternities. Places of Amusement and Dissipation. Slums and Town Nuisances. Special Rural Hygiene and Sanitation. State Departments and Boards of Health. The Proposed Federal Board of Health. Local Boards of Health and Sanitary Officers. Army and Navy Sanitation. The Coroner and the Physician. Quarantine. Infectious Diseases. Immunity. Epidemics. Disinfection. Tuberculosis Sanatoria and Dispensaries. Home Hygiene and Interior Sanitary Installations. Pure Drugs and Foods. Public Works and Corporations. Public Carriers and Sanitation. Laboratory Methods in Sanitation. Medical Societies and Sanitation.

Every physician will want to have this work, as it amounts to a complete encyclopedia of public hygiene and sanitation.

Inebriety. T. D. Crothers, M.D. Supt. Walnut Lodge Hospital, Hartford, Conn. Cloth, 365 pages. Price $3.00. Harvey Publishing Co., Cincinnnati, Ohio.

Those who are acquainted with the author of this work will realize how well prepared he is for its preparation. Dr. Crothers was one of the first to recognize inebriety as a disease and the victim of it as a patient to be treated as a sick person. This idea has been revolutionary and has led to all the real progress that has been made in the study and treatment of this condition.

In this work he treats first of a general view of the causative factors leading to the establishment of inebriety. A broad view is taken and all the factors are taken into consideration. This portion of the subject takes up fifteen chapters and is very thorough. Next we have chapters upon pathology, diagnosis and prognosis and then begins the great subject of treatment.

We can safely say, from the wide experience of Dr. Crothers, that the treatment given is the last word in science up to this time in the restoration of inebriate patients to their normal health and position in society. The general practicing physician will surely want this work.

Hughes' Practice of Medicine. By Daniel E. Hughes, M.D., revised by R. J. E. Scott, M.A., B.C.L., M.D. Limp leather, round corners, gilt edge. 878 pages. Price $2.50. P. Blakiston, Sons & Co., Philadelphia.

We have reviewed this book so often that there seems little more to be said. However, we cannot refrain from reiterating our former opinion of it as one of the most practical works on the subject ever published. Its popularity is attested by the fact that this is the tenth edition of 5,000 copies each. Years ago, when we knew the talented author, the late Dr. Daniel E. Hughes, we kept the book upon our desk constantly for quick reference in our daily practice. We can say no more than to recommend our readers now to do the same. It is concise, dealing only with the more essential phases of the diseases under consideration, avoiding controversial subjects and long, technical descriptions. It is especially strong in diagnosis and treatment.

The General Practitioner as a Specialist. J. D. Albright, M.D. Cloth, 467 pages. Price $3. Published by the author, 3228 N. Broad street, Philadelphia, Pa.

The author has given here, in plain, practical form, the methods of treatment in various disease conditions which have been found most successful in the practice of leading specialists. The

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physician will find it very useful in his daily work. He has also given many methods of treatment, processes and formulas that have been practiced and held as secrets by advertising specialists. This is a very practical work for the general practitioner.

Practical Dietetics, with Reference to Diet in Disease. By Alida Frances Pattee, graduate, Department of Household of Arts, State Normal School, Framingham, Mass.; late Instructor in Dietetics, Bellevue Training Schools for Nurses, Bellevue Hospital, New York City. 12mo, cloth. 550 pages. Price, $1.50 net, postpaid. A. F. Pattee, publisher, 134 South First avenue, Mt. Vernon, N. Y.

This is the sixth edition, revised to meet the exact requirements of the various State Boards of Examiners for Nurses. We have reviewed the previous editions and have nothing further than the highest commendation to say in regard to this one. We do not know of a work upon diet for the sick which has as many practical points as this has.

Primer of Hygiene. John W. Ritchie, M.D., Professor of Biology, College of William and Mary, Virginia, and John C. Caldwell Professor of Biology, George Peabody College for Teachers, Tennessee. Cloth, 184 pages. By mail, 48 cents. World Book Company, Yonkers, N. Y.

This book will be found useful for teachers, parents, nurses and others who have the care of children, and for young people themselves who have grown to the age of understanding. The striking feature of the book is the apt and vivid form of illustration to bring the truth "home" as it is expressed in the text. Space does not allow us to give full detail of contents. We find it a very practical work.

Principles of Public Health. Thomas D. Tuttle, B.S., M.D., Secretary and Executive Officer of the State Board of Health of Montana. Cloth, 186 pages. By mail, 60 cents. World Book Company, Yonkers, N. Y.

This will be found to be a useful book for sanitation of the community, the home and the individual.

The Care and Training of Children. Le Grand Kerr, M.D., author of "Diagnostics of Diseases of Children," "The Baby, Its Care and Development," etc. Cloth, 225 pages. By mail, 82 cents. Funk & Wagnalls Co., New York City.

This is an intelligent effort to introduce the knowledge and experience of the physician into the regime of the parents in undertaking the careful development of their children. In addition to the subject of hygiene, under titles of Clothing, Diet, Bathing, Sleep, Teeth, Weight and Height, the author takes up the various questions pertaining to education, government, punishment, the moral failings of nervous children, the child's literature, friends, amusements, possessions and winding up with a chapter upon evil habits. It will be found not only very useful for parents, but an excellent book for physicians to read for the purpose of instructing parents or for parents themselves to read.

The Etiology of Zymotic Enteritis (Epidemic Diarrhea). By Ralph Vincent, M.D. Published by Balliere, Tindall & Cox, 8 Henrietta street, Covent Garden, London, England.

J. J. TAYLOR, M.D.
4105 Walnut street, Philadelphia, Pa.

Dear Doctor: I received the Physicians' Pocket Account Book, also the Blood Scale, in good shape. The scale for blood testing is a fine thing for a physician, and the Account Book is the best method of keeping accounts I have ever had the pleasure of seeing or owning. Ever since I started practice I have been looking for a book that could be carried in the pocket and at the same time could be depended upon for keeping my accounts each day. I have bought each and every kind of account book that was ever published, I guess, and before I received this one I was still looking for something that would suit me. To be exact, I think I have spent no less than $75.00 in such things, and at the present time have sets of the different books and methods for keeping accounts. Some of them are in handsome oak cabinets, but the cabinet is the only thing that is of value. I would only be too glad to make them a present to any one that would take them away. To make a long story short, the little book you sent me is exactly what I have wanted and answers every requirement. It is complete in every way so far as I can see. For the life of me, I cannot see how you can afford to sell such a book for $1.00. Once a doctor has seen the little book I cannot understand how he could very well refuse to buy one and be willing to pay five dollars instead of one for it. I suppose there will be no trouble in getting another book when this one is full. If you think there will, please let me know, and I will send for a quantity of them. I certainly do not want to run the chances of not being able to get another after finding one that suits me.

Very truly yours,
C. W. HENDRICKSON, M.D.
Huntingdon, Long Island, N. Y.

Doctor, what are the three most prevalent diseases in your practice by number of cases?

In what diseases or surgical conditions does the general family physician most need practical instruction, based upon your own experience and also upon your observation of others?

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THE

Medical Council

A MONTHLY JOURNAL FOR THE PHYSICIAN AND SURGEON.

"WE FIND WISDOM AND STRENGTH IN COUNCIL."

J. J. TAYLOR, M.D. EDITOR AND PUBLISHER | PHILADELPHIA, PA. | 4105 WALNUT STREET

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The Doctor and the Dentist—From the Dentist's Viewpoint.

Every dentist aims to secure the good-will of the doctors, hoping thereby to secure new patronage and have cases referred to him. While they are too politic to say so, many dentists feel that the doctors do not give them sufficient credit as scientific men engaged in a surgical specialty. As a matter of fact, dentists are required to pursue many of the studies taken by medical students, and they are in position not only to give advice upon dental matters but also to very accurately measure the scientific attainments of the doctor. Doctors forget this latter, and it will pay to get the good-will of the dentist, who may refer cases to us and to whom we may also refer our cases. Dentists feel that the physicians should more fully inform themselves regarding dental science and take occasion to advise patients to attend to their teeth. The dentists are not alone in this matter, since health boards are taking up the question of the condition of the teeth of the school children, and it is well known how nutrition will suffer or the nervous system be impaired by defective or carious teeth.

Dentists care very little how many teeth the doctors extract, as it is neither a pleasant nor a profitable branch of dental work, but they do deplore the fact that many doctors do extracting in a bungling or violent manner and usually with an utterly inadequate set of forceps. When a patient comes for a set of teeth it is a matter of importance that the preceding extraction shall have been done in a proper manner. Also the unwise extraction of teeth may render impossible otherwise very feasible bridge work. Many teeth should have been saved that have been extracted by physicians. Especially is this the case with the first set of teeth. Many children go for years with gaps in the teeth contour and are unable to masticate food properly until after the eruption of the permanent set. A very trifing little operation will often preserve these teeth until they reach their natural limit, and the temporary fillings will add much to the comfort, appearance and health of the child. Let us send our little patients to the dentist before we yield to entreaty to end pain by ending the tooth. He may save the tooth for several years. The cities, but more particularly the rural districts, are full of people who are monuments to unwise medical handling of their teeth, and it is probably no exaggeration to say that half of the sets of "store teeth" in persons under forty years of age would have been unnecesary so early in life had the teeth received proper and scientific care. Quite aside from this, foul teeth are a fertile source of constantly infected and inflamed stomachs, sore mouths, bad breath and sometimes of serious general infections.

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Doctors are inclined to unload upon the dentist cases with swollen jaws or faces, and in which it would be unwise for the dentist to do any operative work until after the pus is evacuated or the inflammation has subsided. Also the doctor may inject cocaine solutions around painful teeth and the drug may set up a very ugly ulceration, which cocaine is very apt to do with the gums and the alveoli. We should be more conservative in our use of cocaine solutions about the teeth and we should not sidestep the surgical treatment of the gums and adjoining structures and push it all off upon the dentist. Much of it is our job and we should not expect the dentist to do the impossible.

We should be more considerate of the time and the engagements of the dentist and should not demand that he drop everything to attend to our cases that we could relieve until such time as he can give them proper attention. It is not fair to expect him to do unnecessary night work, under the defective illumination, necessarily handicapping him in work upon a cavity like the mouth.

Dentists are hesitating to give "gas" to female patients when alone with them. We are personally aware of two cases in which witnesses saved the dentists from charges, the result of what the patients *imagined* occurred while under the influence of "gas." Many persons have lascivious dreams while undergoing slight operations under an anesthetic. We should not believe stories told to us about a dentist without some substantial basis for them, and when we send patients to him we should relieve his mind by advising some reliable person to accompany them to the dentist's office. When we send to the dentist patients with weak hearts or that we have drugged with narcotics, we should inform him of the facts in the case.

Many persons request their physician to accompany them to the dentist in order to give a general anesthetic while the dentist extracts several teeth. Perhaps it is telling a secret, but many dentists dread to see such cases, since most doctors place the patient profoundly under ether, charge three to five dollars for the job, and walk out and leave the sick patient in the chair to recover from the anesthetic at their leisure and then complain if the dentist charges over 25 cents per tooth. We have known of cases of this character taking three hours of the dentist's time and being otherwise annoying to him.

As a matter of fact, it is seldom necessary to give an anesthetic to profound narcosis for tooth extraction. A very little chloroform is usually sufficient to render the patient temporarily unconscious of pain and he recovers in a few minutes after the work is done. Chloroform is preferable, from many points of view, to ether, in such cases but even ether suffices when very little, indeed, is given. We have known of dentists extracting under chloroform and in which the patient was able to converse in a minute or two. With such a small operation, as is extraction, we need not fear shock, sometimes induced in major surgery while partially anesthetized.

It would not hurt at all to get the dentists into our medical societies. They would learn from us and we could learn from them, and it would tend toward a better understanding all around. Let us be professional brothers to the ethical dentists.

The Fixation of Bone Fragments.

Works upon surgery do not lay sufficient emphasis upon the practical difficulties encountered in wiring together the fragments of a comminuted or an oblique fracture. The diagrams do not show the hemorrhage, the obtrusion of soft tissues and the contraction of tissues, or deformities due to unequal muscular tension all or any of which present difficulties relating to the patient himself. In addition to this, the wire cannot be twisted tight enough to bring the fragments into the apposition so

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clearly depicted in the pictures, or the wire breaks at an inopportune moment or other little mechanical annoyances present. Finally, it is often quite a ticklish little job to remove the wire entire after union has sufficiently progressed.

We are inclined to favor the use, so far as possible, of absorbable kangaroo tendon in fixing such fractures as those of the clavicle, olecranon and separated processes. Usually there is little tension upon them and the special necessity for asepsis renders the use of tendon a mere detail. The use of bronze-aluminum wire is preferable to silver, but tendon will hold many cases and solve many annoying difficulties.

Rough and Ready Wasserman Reactions.

We have been somewhat amused at certain editorial expressions relative to this test for syphilis. One editor, speaking to the general practitioner, advises:

"Now it strikes us that there is only one way to handle these patients after giving them the intravenous injection, and that is, by making monthly Wassermann tests of their blood, so that we may, as it were, "anticipate" a recurrence and prevent it by giving more of this drug (meaning salvarsan). These Wassermann tests should be carried out as religiously by the practitioner as are his tests of the urine of his diabetics or his nephritics."

We quite agree that the above would be very good practice, but we sometimes wonder how many editors, let alone general practitioners, could give any intelligent idea of the technic of the Wassermann reaction. Laboratories charge fifteen dollars for one Wassermann test, and there are few general practitioners indeed who possess an incubator and the other appliances required. How many general practitioners are prepared to rise and tell us how to prepare the antigen, the deactivated serum, the amboceptor, the complement, and the other solutions and substances required? Don't all speak at once.

How many of us have the time or the facilities to skirmish round for a fresh syphilitic fetal liver, fresh sheep blood, fresh extract of guinea-pig's heart, and the other necessary substances every few days in order to perform this reaction every time we are not satisfied with clinical diagnosis as to the state of our syphilitic patients? Again, how many of the patients would pay us fifteen dollars per month for a mere confirmatory test?

We are not calling in question the value of the test in proper cases, but it would be about as sensible to advise a general practitioner to shoe his own horses or calibrate his own thermometers as to urge him to perform his own Wassermann reactions, unless he is fully equipped in a way few practitioners ever will be.

Effects of Epsom Salts.

Attention has been recently called to the fact that magnesium sulphate, so long regarded as harmless, is not without its toxicology—based on about a dozen cases, half of which proved fatal. No doubt many mild cases have passed unnoticed, the total consumption of the drug being very large. Action depends on the rapidity and completeness of the absorption of the drug. Generally absorption takes place in proportion to the concentration of the draught. In hydremic conditions absorption does not take place and the dry salt, when ingested, is absorbed without producing catharsis. Hot concentrated (saturated) solutions now used locally with such great success in ivy poisoning, erysipelas, etc., are not likely to yield toxic effects.

Removing Blood Clots from Fractures.

Bier (*Med. Klinik*, 1905), of hyperemic fame, contended that the effusion of blood between the fragments of a fracture facilitates bone formation. Some American surgeons have agreed with him and do not remove the blood clots in compound fractures unless it is probable that the wound is infected. Bier went so far as to inject fresh blood in cases from which the clots were removed.

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Sometimes we are inclined to the view that too much blood is washed away in the dressing of non-infected wounds of the soft tissues. Laparotomists long ago concluded that it was poor policy to over-flush the abdominal cavity, thus washing away the natural secretions. May it not be equally bad policy to wash away too much of the blood that nature supplies to a wound and that so often facilitates healing? Repair of osseous tissue imposes a greater strain than does restoration of soft tissues, and we suggest a study of the matter suggested by Bier in the routine work of our readers. Our own experience bears out his contention.

Measles and Bronchopneumonia.

The inflamed mucous membranes of the respiratory tract found in measles need only an infection of slight degree to induce bronchopneumonia. And the longer we practice the more are we inclined to the view that measles is among the list of diseases benefited by fresh air. Certainly it is the case that fresh air goes a long way in the *prevention* of bronchopneumonia.

Too much wrapping up of the little sufferer, the giving of hot teas, the extreme darkening of the room, the lack of ventilation, the presence of dust and the fouling of the air with gases resulting from gas and coal-oil stoves all these factors give the infective agents a chance to produce a 40 per cent. mortality in measles. Even if bronchopneumonia be not induced, vitality is reduced when our cases of measles are conducted as the average old lady wants them handled.

Restraint of the cough is another factor to prevent bronchopneumonia, and it appears that small doses of sedatives are necessary in many cases. Dover's powder may serve a useful purpose, or small doses of codeine with bromides.

It is important that any subscriber who changes his location should at once notify us of his change, giving his old address also, so as not to miss any numbers of THE COUNCIL.

Treatment of Infantile Pyelocystitis.

According to an elaborate clinical paper, by Dr. Edgar B. Friedenwald, Baltimore, Md. (*Archives of Pediatrics*, Nov., 1910), this disease was first described in 1894, under the title of colicystitis. Another term, now practically abandoned, is pyelitis. The author avers that the disease is really very common, in support of which he reports eighty cases.

The disease is an acute infection of the urinary apparatus, involving, generally, the bladder and pelves of the kidney, simple catarrhal at the onset and often so mild as to escape recognition, apart from an examination of the urine. Such may disappear spontaneously. Again, it is severe with a high intermittent, remittent or continuous fever. It may become chronic and form permanent lesions.

The severe form at times resembles very closely other severe conditions. With marked toxic symptoms, this disease is at times very like an alimentary intoxication; with cough and nostril breathing we may think of a pneumonia; with opisthotonos, tremors and disturbances of consciousness the picture is not unlike meningitis; with an intermittent temperature, and particularly where there are shaking chills, malaria may be thought of; and, finally, the paleness, quietness, listlessness, and susceptibility to touch may remind very forcibly of Morbus Barlow. A careful urinary examination will always clear up any doubt and assure the diagnosis. The urine will usually show an acid reaction, some slight cloudiness, some albumin, while the sediment contains usually pus cells, bacterial clumps and some cubital or tailed epithelium.

The two indications in treatment are the bringing of water into the system and the giving of certain urinary antiseptics. The first is accomplished quickly by flushing the urinary apparatus and overcoming the water hunger, if the child will drink large quantities of water. However, this is often not the case, and we must either use the stomach tube or rectal enemata. The medicament found most reliable at this institution is unquestionably salol in small doses three to four times daily. In a few cases hexamethylenamin yielded better results than salol.

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Original Articles

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We are not responsible for the views expressed by contributors.

Sentences, like sunbeams, burn deepest when most condensed.

Specialism, With Special Reference to Proctology.

By Lewis H. Adler, Jr., M.D.,

Professor of Diseases of the Rectum, Philadelphia Polyclinic and College for Graduates in Medicine; formerly Prosector to the Professor of Anatomy, Medical Department of the University of Pennsylvania; Consulting Surgeon, Charity Hospital; Secretary of the American Proctologic Society, etc., etc.

Philadelphia, Penna.

In a series of articles which I have consented to prepare for the readers of The Medical Council, I have deemed it of advantage to start out with the subject of specialism, its relations to the general practitioner, etc., with the idea of promoting a more cordial relationship with a condition that is the outcome of the twentieth century environment.

The age is one of commercialism, and the struggle for existence is keen. Not only is this so in a business way, but it is equally true of professional life, and to a greater extent than is generally believed. It is not strange, therefore, that the general medical practitioner looks with awe and anxiety at the growth of the specialist and the multiplication of the specialties, and is found voicing the question of "what is to become of the family doctor?" or "Is my position to become merely that of an intelligence office, where the general public can obtain information as to suitable specialists for the treatment of eye, ear, nose, throat, stomach, heart, lungs, kidney, liver, or other organs?"

From another viewpoint, let one ask himself what would be the result if it were possible to abolish the specialist? Would the best interest of medicine be thereby conserved? Would the general practitioner, in the multiplicity of diseases coming under his care, be enabled to study the individual characteristics and phase of each complaint with the thoroughness necessary to permit him to draw conclusions and make a diagnosis that would enhance the progress of medicine to the same extent, as under existing circumstances? Would the health of the public be cared for as well under such a regime? I firmly believe that no fair-minded person could give other than a negative answer to each of these questions. Admitting these facts, we must acknowledge the necessity for specialists.

That there is an apparent antagonism on the part of some general practitioners toward specialists, it would be folly to deny. That this antagonism is justifiable under certain circumstances must be admitted. There is just cause for complaint on the part of the general practitioner when the specialist exceeds his authority in treating a patient for any further trouble than that for which he was referred. Upon the completion of the work for which the specialist was consulted, the patient should be returned for any subsequent advice or attention to his family physician. No specialist has the right to refer the patient to another specialist, without first consulting the family physician.

Another cause for grievance and the occasion of the drifting apart of the general and special practitioner is that a large mass of the public has been educated to seek the advice and treatment of the specialist when, in their judgment, their physical needs require attention, and they do this without consulting their family doctor. It is true that the specialist may with propriety treat such patients and ignore the family physician, but such a course is not productive of the cordial relationship that should exist between all honorable and regular practitioners of medicine. When the patient presents himself at the office of a specialist without an introduction from his own physician, one of the first questions that should be asked is, "Who referred you?" If it be some one other than the family physician, the next inquiry should be, "Who is your family physician?" This should be entered with the patient's history in the proper place, and as soon as possible thereafter a note should be sent to the physician stating that such and such a person has been seen and examined, with the particulars and facts ascertained. Furthermore, any suggestions regarding the constitutional treatment should be made to the family physician and left for him to prescribe. If this course were followed by all specialists, a much more cordial fellowship would soon be recognizable within the rank and file of our profession and a large part of the enmity now evinced by the general practitioner to-

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wards the growth of specialism would be forever dissipated.

Viewed from my standpoint, the progress of specialism does the general practitioner much more good than harm. A single example will have to suffice as an illustration, for time will not permit a thorough consideration of all the features which would be in order in an extended discussion of the matter. All specialists have their local and national societies in which the individual members, either at their annual or monthly meetings, relate their individual experiences of cases with which they come into more or less daily contact, which are afflicted with some ailment of unique or special import. In the case of Proctology, at each annual gathering the individual experiences of one or all of its members are given concerning the results obtained from various methods of treatment; original or more extended observations are recorded regarding the pathology, symptomatology, diagnosis, and prognosis of the different rectal diseases; instruments are shown of recent device; new operative procedures are described and any additional information worthy of record is detailed regarding well-known operations. All this material, as presented by the individual, is subjected, during its recital, to the closest scrutiny by the members collectively and then is discussed in a frank manner by the leading proctologists in this country, with but one natural result, the speedy separation of the chaff from the wheat. These meetings are open to the members of the medical profession and they are invited to freely partake of the knowledge offered, as well as to enter into the discussion, if they have any information (as they often have), on the subject discussed. Furthermore, those unable to attend the meetings have the opportunity of reading in the medical journals the various papers read before the Society, as well as the discussions pertaining thereto. In addition, an annual volume of Transactions is published, which may be procured by those interested at about the cost of publication. In this way the general practitioner, if he so desires, may fit himself, according to his individual capacity, properly to diagnose and treat diseases of the rectum, even to the performance of operative measures. In this manner the specialist has largely benefited the general practitioner without deriving or seeking any direct professional gain.

Viewed from the standpoint of the specialist, what should be the attitude of the general practitioner towards the reference of cases in consultation with the specialist? This is a broad subject, but the question can be answered somewhat tersely, it is true, by saying: *By acting honestly to the inner conviction of what is right to one's own interest and at the same time just to the patient's welfare.* I am glad to say that there are many men whose professional career is conducted on this principle. But what of the number who are not actuated by such motives? These latter individuals perform major operations with little or no training in surgical work and with less knowledge of the risk involved to human life. If the patient lives, their egotism is increased and their self-importance and self-esteem made greater. When the contrary result ensues, there is no lessening of the personal vanity, but the death is attributed to natural causes, which in point of fact it is, but not in the sense of the ordinary acceptance of that term.

These remarks are made, not because they are agreeable, nor from any desire to show any one's superiority, but as they are facts they seem essential as a sort of preface to what I now desire to state. These same men who so recklessly perform almost all of the operations embodied in the surgical field, and who are never known to require consultation in a purely medical case, unless the patient is at death's door or is so sick that the patient's family becomes frightened, never attempt the removal of a cataract, and when they have a case of fractured bone hasten to call in assistance. Why? The loss of an eye or an imperfectly set bone does not kill a patient, but it does prove a lasting monument of the lack of a medical man's knowledge, ability and skill.

My opinion of the ideal specialist is one who, after graduation, serves a full term of residency in some hospital in one of our large cities, and then takes up the general practice of his profession, with some more or less definite idea that at some time in the future, when his finances and acquaintanceship, both among the profession and the laity, are sufficient to warrant the step, he will take up whatever special line of work which either his own liking dictates or is indicated by the course of events which shape the destiny of many men. From five to ten years spent in general practice is none too long for the average individual. During that time as much attention as is possible should be given to the study of the diseases to which exclusive attention is to

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be devoted later on. When it is possible, associations should be formed with a specialist in the desired line having a hospital position where, as an assistant, much experience may be gained and practical work done. After the proper length of time has been spent in gaining the required knowledge and experience in its broadest sense, the individual desirous of specializing his work is prepared to take up the requisite post-graduate instruction. At least a year's time should be devoted to this work. From half to three-quarters of this period can be spent in colleges in this country, and the remainder abroad.

To the student of proctology I would advise a division of time so arranged as to enable him to spend a couple of months in each of three or four teaching centers of this country. In this manner not only is a variety of work seen, but also the various clinicians with whom he comes in contact impress on him their individuality, both in operative technic and treatment.

It is true that the so-called specialist who, immediately after graduation, attempts to pose as an expert in any line of medical science, will, sooner or later, bring disgrace upon himself. The same remarks apply with equal force to the practitioner who, after some years of general work, attends a post-graduate course for six weeks or thereabouts and then deems himself a full-fledged specialist for the line of work to which his attention has been devoted.

The foregoing remarks demonstrate that the profession of medicine and the public welfare are materially benefited by having in the community such practitioners who, at the proper time of their professional career, devote their entire time and attention to the study and treatment of some particular portion of the human economy. It is only within recent years that our medical colleges have appreciated the importance of students having at least a rudimentary idea of the specialties, such as ophthalmology, otology, laryngology, and dermatology, and have required examination in these branches. Those of us who graduated fifteen or twenty years ago can recall the meager attendance of students in these clinics at all times; and especially in the latter half of the term the professor of special branches considered himself fortunate if he could secure an attendance in the amphitheater of a half dozen men.

That this teaching of the specialties should include the subject of Proctology is the earnest belief of the writer. That students should be expected to acquire a working knowledge of this and other specialties, and to pass an examination upon these topics, is unquestioned; but I would not expect (though I sometimes believe that a mistake is made by the teacher of these special branches in so expecting) the undergraduate student to have a much more definite knowledge of these special subjects than the time possible to devote to these topics warrants and to the detriment of the major branches.

In conclusion, permit me to offer a few words of advice: In the first place, let us be considerate of the errors in the diagnosis made by others, which opportunity happens to reveal to us. No one is infallible. The practitioner who never makes a mistake is either ignorant of its occurrence or his practice is so limited that he has little opportunity to err. A shrug of the shoulders or the elevation of the brow of a physician being consulted may convey to the patient as much condemnation of another physician's diagnosis as though the harshest language had actually been used; and, finally, we must not rush into print with articles of a laudatory character in which, too often, unstinted praise and unmerited recommendation is given to some new drug or novel method of treatment, without having had ample experience to justify the same. Similar remarks are likewise applicable to those who publish a description of some newly devised operation without having taken the necessary time to test its merits, much less its demerits.

The avoidance of these evils, for such we know them to be, will save much unnecessary confusion in the minds of readers of our medical journals, who to-day see statements made to this or that effect, which to-morrow are contradicted.

1610 Arch street.

(In the next article Dr. Adler will discuss the subject of Diagnosis of Rectal Diseases.)

To The Medical Council:

I notice in a recent issue of your journal that information relative to the dose of thymol for children suffering with hookworm is desired. I recall two children, ages 7 and 3 years, to whom I gave 40 and 20 grains, respectively, in two equal doses. The results were good, with no ill effects.

Rea Parker, M.D.

Smithfield, Va.

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Some Points Gleaned from Experience and Medical Literature.

By Nutting S. Fraser, M.B. (Edin.)
St. John's, Newfoundland.

After twenty-five years' experience in the practice of medicine, one may be pardoned if he thinks that his experience has taught him some things worth knowing. The actual experience of the practicing physician is not often recorded in medical print, but it would, probably, be of considerable value to us all if the successful doctors would more frequently give us the benefit of their experience. I propose to tell of some of the things I have found of value, but fear I cannot quote my authorities, as some would be gleaned from medical journals many years old.

Otitis Media

in infants and children is one of the commonest causes of screeching, and it is to blame for the loss of many a night's sleep on the part of the rest of the household. The baby will stiffen himself out and cry by the hour, and the anxious mother will summon the medical attendant with the news that the baby is going into convulsions, only to be reassured by the doctor that it is simply a case of "teething." Various teething powders are given without much effect, and, after a day or so, a discharging ear presents its visiting card to the doctor; but even then the doctor, in many cases, informs the mother that the discharge is just a part of the "teething." I have never yet seen a case of illness in an infant that I could conscientiously call "teething." The observant doctor will notice in these cases that baby keeps throwing one arm about and soon he will see that the arm movement is regular, and that each time the hand comes up to the ear, although the baby may be too young definitely to put the hand to the ear. As a rule the temperature is up a few degrees, but the trouble may not have had sufficient duration to have caused temperature. Of course the specialist, or even the up-to-date practitioner, can diagnose the case immediately with the aural speculum; but the man who is not skillful in the use of the speculum need not delay his diagnosis and treatment on that account, and it is the treatment that I want to lay especial stress upon. In such cases, to simply fill the meatus with equal parts of sterile water and glycerine of carbolic acid, comfortably warmed, will give immediate relief, and, before you leave the house, you will have the satisfaction of seeing baby fast asleep and quite comfortable. So far as I can gather, this remedy for the pain of an early otitis media is unknown to the profession, and I have frequently had patients write me for the prescription after they have left home; for, in my experience, earache is a frequent cause of pain and crying in infants.

Phymosis.

The next most commonly overlooked cause of trouble in infants is phymosis, with a foreskin so tight that considerable force is necessary to overcome the obstruction. Nurse will tell you that baby cries a great deal, and may stop crying for a short while, and then grunts, and soon afterward the napkin is wet. If she watches baby she will find that the water comes for a little while and then stops. In these cases the back pressure may even cause a hydronephrosis, as I saw in an infant aged six months, in which death resulted. Of course, the cure can only be effected by an operation, and in such cases I have frequently been told the day after operation that baby slept quietly all night, the first time since he was born. I have been interested in these cases in watching the temperature, and could show some very interesting temperature charts, the temperature in some cases reaching 104 degrees F., and in some even 105 degrees F.

Antipyrine in Babies.

Before leaving infants, I would like to say that the most valuable nerve sedative in a crying baby with nothing organically wrong, is antipyrine in ½ gr. or 1 gr. dose at bedtime. Its value in whooping-cough is well known, but it is also the only "sleeping powder" I have ever prescribed for a baby. This, of course, with the proviso that I have carefully examined the baby and excluded all causes of pain.

Marasmus.

The term "marasmus" probably covers a great many diseases—any, in fact, which may cause a wasting. Without going into a discussion on this point, it is remarkable how many of these babies pick up immediately on mercurials. Either ***hydrarg. cum creta,*** gr. ss., twice or three times a day, or ten or fifteen minims of the liquor hydrarg. perchlor three times a day in milk. Milk covers the taste of the latter perfectly. Sometimes it is an advantage to add a few drops of tinct. ferri perchlor., but in general the mercurial is sufficient. It is

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not well to depend upon the history in these cases. The father and mother may bear exceptional characters, but the history from the grandparents is not so easily obtained. I rarely question a patient on these points, but am content to use my own observation as to the other members of the family, the abortions, and the effect of treatment in the case of the baby.

The Dementias.

By G. Wilse Robinson, M.D.,
Superintendent the Punton Sanitarium, Kansas City, Mo.

Dementia is a term which is frequently used by the laity and many physicians as a synonym of insanity, but this term should be applied only to those conditions in which there is a general enfeeblement of all of the mental faculties in persons who have previously had a normal mind. It cannot properly be applied to the mental enfeeblement of idiots and imbeciles. The degree of mental enfeeblement in conditions of dementia is very variable, and ranges through all graduations from very slight dullness of the mental faculties to profound and complete loss of all the intellectual faculties.

Whether the dementia be of the so-called primary or secondary type, it is always secondary to anatomical changes in the nerve cells of the cerebral cortex. These changes are of a degenerative type, and may be caused by cortical hemorrhage, as in apoplexy; a thrombus, an embolus, arteriosclerosis, endarteritis, endophlebitis, anemias of various sorts, wasting diseases, the intoxications, either from infectious diseases; auto-intoxications, such as gastro-intestinal, thyroid, etc., exointoxications, such as alcohol, lead poisoning, long continued use of morphine, chloral, cocaine, bromides, and many other similar drugs.

From the above it will be readily seen that anything, either of a chemical or mechanical nature, which interferes with the nutrition of the cortical nerve cells for any considerable period of time, may cause degenerative changes and result in some form of dementia. The symptoms of dementia are of a general and special type. The general symptoms are decreased or complete loss of memory, impaired judgment, perverted ideation, lessened will power, perverted perceptions, pervertions of emotions and sentiments, and pervertions of consciousness.

I shall discuss the special symptomatology while discussing the special types of dementia.

The various types of dementia recognized in the usual classification are, paralytic dementia, secondary dementia, senile dementia, and dementia precox. It is not my intention to discuss paralytic dementia in this article.

Secondary Dementia.

The importance of secondary dementia as a factor in the causation of chronic mental invalidism can be readily recognized when we consider the number of secondary dements in our hospitals for the insane. It is estimated by some that at least two-thirds of the entire population of the average insane hospital belong to this class. This may be a trifle high estimate, but the fact remains that more than half of them can easily be demonstrated as being secondary dements. Of course, the percentage of secondary dements in any such hospital will be higher in those which have been receiving patients for a long period of time than in those which have been recently organized, as the number is being continuously augmented from year to year by the left-overs who have failed to recover from their acute psychosis, or by the gradually increasing number of epileptic, alcoholic and syphilitic dements.

The melancholias, manias, paranoias, or any form of psychosis may progress into secondary dementia. Many epileptics, alcoholics, syphilitics and apoplectics also develop into this condition.

We recognize two groups of secondary dements, the *apathetic* and the *agitated*. The *apathetic dements* are quiet, have little or nothing to say, lie or crouch around on the floor in dark corners or closets, indifferent as to their condition or surroundings. They manifest no energy of mind or body; they smear themselves with and even eat their own filth; their face is expressionless; in many cases they are emotionless to an extreme degree.

The *agitated dements* are restless, with marked instability of the emotions. They laugh boisterously and most inopportunely and immoderately about the merest trifles, and are excited to violent anger by causes which would not cause a ripple in their emotions if they were in a normal state. They

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pick their clothing to pieces, pull out their hair, pick holes in their flesh, smear their person with their filth, eat filth and swallow nails, buttons, eat their clothing—in fact, all objects which can be swallowed find their way to the stomachs of some of these patients. In speech they are incoherent and confused. All of the higher concepts are depressed or completely lost; this is especially true of those of an esthetic or ethical character. Their habits are loathsome to a degree. They pick up and store away in their pockets strings, nails, sticks, glass, tin cans, pieces of paper, particles of food, and all other articles which they believe to be useful or ornamental, or which strikes their fancy. Some of them have hallucinations, some delusions, and many have occasional exacerbations of the original psychosis. Of course, the symptoms as given above are not present in the same degree in all cases of secondary dementia, but are markedly variable in character.

Senile Dementia.

This condition is one of progressive mental enfeeblement, and results from senile involution of the brain. It usually occurs in the aged, but in certain persons with congenital predisposition to early changes, it may occur in the presenile period, even as early as the thirtieth year. In all cases there is a hereditary factor present or the habits of the patient have been such as to develop a predisposition. It is not a question so much of age as it is of organic changes of a particular kind coming on insidiously, and these changes are always associated with arterial changes, which precede the degenerative changes in the cortical nerve cells.

Symptomatology.

The earliest symptom is a failure of memory for recent events, and a gradual increasing loss of memory for events more remote. The patient lives anew the life of his young manhood and childhood. The events of this period are brought down to the present, acquaintances of to-day seem to be the friends of his youth. The judgment of the patient becomes perverted. There is much confusion of ideas; disorientation for time, place and person is frequently present. The perversion of emotions is manifested by a tendency on the part of the patient to cry readily and without sufficient cause, or to laugh immoderately, or to be excited to anger by slight provocation. The instability of the emotions results in emotional effects out of all proportion to the affects. The will power is usually weakened, but negativism is frequently marked. Associated with the mental enfeeblement of senile dementia, there is frequently some form of psychosis, such as involutional melancholia, confusional insanity, or acute mania. The delusions characteristic of this period are persecutory or depressive. The condition may be one of stupor or agitation.

Dementia Precox.

This form of dementia, occurring in the adolescent period of life, is of three types; catatonic hebephrenic, and paranoid.

The causes of dementia precox are predisposing and exciting. The predisposing causes are an inheritance of a nervous instability, or of a predisposition to early degenerative changes in the central nervous system. The exciting causes are any of the various forms of toxemia, such as autointoxications, glandular, intestinal, renal and so on, or exointoxications, such as alcoholic, tobacco, opium, etc.

Overwork, worry and mental stress are potent factors in the production of dementia precox. Sexual excesses, self-abuse, and, in fact, any form of perversion or intemperance contribute to its production.

Symptoms—The catatonic form of dementia precox manifests the general symptoms of mental enfeeblement, and also certain special symptoms, as marked negativism, stereotypy, posturing, automatism. The flow of ideas is retarded and there is considerable difficulty in the association of ideas, the judgment is impaired, the attention is perverted and there is marked emotional deterioration. In the early stages there is usually a state of depression which may alternate with exaltation. Later the patient feels neither sadness nor joy, and his condition is an apparent paralysis of the emotions.

Hebephrenia—This form of dementia precox is marked by gradually progressing mental enfeeblement of all of the mental faculties without perversions. The hebephrenics progress mentally to a certain point and then, without apparent cause, they begin to retrogress and gradually go back.

The *paranoid type* of dementia precox is characterized by some acquired mental enfeeblement followed by the development of systematized delusions which are usually of a persecutory or religious type. The above

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mentioned forms of dementia precox all develop before the twenty-fifth year. The hebephrenic form is characteristic of the real cases, while the catatonic form develops a little later, and the paranoid form in the older subjects.

Treatment.

For the senile dements little can be done except they be treated for associated psychoses. Many of them are placed in institutions for the custodial care. For the secondary dements and the various types of dementia precox our institutions for the care and treatment of the insane should be educational institutions in the fullest possible meaning of the term. These patients are mentally reduced and they can be benefited only by re-education and redevelopment. Industrial re-education offers the most hope to them, and this form of treatment for these patients has passed the experimental stage. Its worth has been abundantly demonstrated.

Prophylactic treatment for all forms of dementia is of much value. In order to avoid dementia precox, those with a predisposition to this condition should avoid excessive mental work, and all forms of excesses of conduct and intemperance. They should especially avoid excessive use of tobacco and sexual excesses.

All forms of acute insanity should be given active early treatment in an institution in order to avoid secondary dementia. Those of advancing years should avoid excesses and do a limited amount of work in order to avoid senile dementia.

Thirtieth St. and Lydia Ave.

Mistakes in Diagnosis.

C. S. Neer, M.D.
Vinita, Okla.

An opportunity to witness quite a number of post-mortem examinations and comparison of the findings with the ante-mortem diagnosis, has convinced me that modern physicians must admit, with Hippocrates, that "experience is fallacious, and judgment difficult." If it were possible for us to have a post-mortem examination in all our fatal cases I am sure that there are few of us who would not be astonished at the multitude of our mistakes of omission and commission.

To be sure, it is not to be expected that the clinician will be able to write out in advance the complete post-mortem findings. I remember very well the sarcasm of the pathologist who was doing the post-mortem on a patient I had treated in a large city hospital. A diagnosis of aortic insufficiency with broken compensation had been made, and aortic insufficiency was found in a marked degree post-mortem; but in addition to this there was a decided dilatation of the first portion of the arch, amounting to a small fusiform aneurism. On finding this the pathologist asked whether I had examined the patient's chest at all. It was manifestly impossible in this case to recognize the aneurism during life.

An incorrect diagnosis may be excusable. The physician, after obtaining and weighing every available fact bearing upon the case, may be unable to arrive at the correct solution among two or more possibilities. The true condition may be considered and dismissed for lack of evidence, or a fortunate guess may result in a correct diagnosis. On the other hand, the trouble may present no symptoms by which it may be recognized or even suspected, as, for instance, in the following case:

A healthy looking man about 40 years of age came to the hospital complaining of frontal headache. He would answer questions, but was somewhat confused mentally. There was a tendency to drowsiness, and the eyelids drooped when he was awake. The pulse was 60. On his admission these were the only symptoms. There was no evidence of head injury or of syphilis; the urine was normal and there was no elevation of temperature. On the second day the gait was noticed to be disturbed, the patient falling toward the left when he attempted to walk. At the same time a slight paralysis of the left side of the face, and a slight dilatation of the left pupil were noticed. There was no other paralysis. The headache continued and the patient became more and more stuporous and died on the fourth day. Very careful examinations were made frequently. A lumbar puncture was done and the fluid found clear. There was evidently some serious trouble within the cranium, but what was it? The absence of any history or sign of head injury and the very gradual development of the symptoms seemed to negative a diagnosis of any form of intracranial hemorrhage. Cerebral syphilis was to be considered, but the evidence would not permit a positive diagnosis of that condition. The gradual development of the

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symptoms and the comparatively late development of coma might suggest cerebral thrombosis. At post-mortem a large subdural hemorrhage was found covering the side of the left hemisphere. The area covered was almost as large as the hand. It will be noticed that, although the motor area was completely covered, there had been no spasm. It would seem that a diagnosis in this case was hardly possible by any means during life.

This case suggests a fact emphasized by Cabot that an exact diagnosis of those cases which are classed under the term "apoplexy" is frequently impossible. He says, "It is confessedly impossible to distinguish hemorrhage, rapid thrombosis and embolism from any study of the resulting disturbance of function." He has also called attention to the fact that many of the cases which present during life the ordinary symptoms of apoplexy, show at post-mortem only an extensive arterio sclerosis of the cerebral vessels, without hemorrhage, thrombosis or embolism.

There is another class of cases in which the diagnosis is possible only by the closest attention to the history, symptoms and physical signs presented by the patient, and often impossible without the laboratory aids.

A young Greek laborer was in the hospital for months with all the symptoms and signs of advanced pulmonary tuberculosis. He was emaciated, coughed large quantities of sputum, had several hemorrhages from the lungs and presented a large area of dullness with rales in the lower part of one lung. His sputum was sent to the laboratory in order that he might be transferred to the tubercular ward after the bacilli had been found. But, to the surprise of the attendant, the report came back negative. Other specimens were examined, with the same result. In all, dozens of examinations of the sputum were made by different men, but no bacilli could be found. After several months, during which time the case was regarded as a curiosity, the physician who then had charge of the case discovered in the sputum the hooklets of tenia echinococcus. The diagnosis was made. The patient later on began to gain in weight and left the hospital in very good condition.

Another case: A man of 45 had been ill for several weeks with pain of a dull character in the lower epigastrium, independent of eating, and pain and soreness in the limbs. Some fever was present for several days in the beginning of the trouble. He had also had some frequency of urination, and had had some difficulty in holding the urine. He had lost considerable weight and had become nervous and irritable. Patient had been to several physicians who did not arrive at any definite diagnosis.

Examination showed a tall, rather poorly nourished man. Nothing was found abnormal in the thoracic organs, and nothing in the abdomen beyond slight tenderness in the epigastrium. The legs showed some edema and there was slight puffiness under the eyes. Urinalysis showed no albumen, sugar, casts or pus. The specific gravity was 1020. All reflexes were normal. A blood examination was made and showed the following: Leucocytes, 12,000. Differential count showed, polynuclear neutrophiles, 20 per cent.; eosinophiles, 58.5 per cent.; large mononuclears, 12.8 per cent.; small mononuclears, 7.6 per cent.; mast cells, 1 per cent.

What attracted attention was of course the enormous increase in the eosinophiles over the normal 3 per cent. This led us to suspect at once a parasitic disease as the most common cause of a marked eosinophilia. In connection with the abdominal pain and the edema, the increase in the eosinophiles caused us to think of trichinosis, and this proved to be the correct diagnosis.

By the way, it is remarkable how much light is sometimes thrown upon a case by a glance at a stained smear of the blood. With a little practice the physician can see in a minute whether or not there is any considerable leucocytosis. An accurate numerical count with the pipette and ruled disk is not necessary for ordinary work. Thus, without any complicated apparatus, the physician can tell from the stained smear at once in which of two classes his case of fever belongs, whether in that class characterized by leucocytosis, such as the various forms of sepsis and most of the infectious diseases, or in that class in which there is no increase in the leucocytes, represented by typhoid and malaria.

Mistakes in diagnosis will occasionally occur from a misinterpretation of apparently pathognomonic signs, as in the following case:

A man of 40 was seen for the first time in a profoundly septic condition. There was complete dullness and diminished breath sounds over the lower portion of the right lung. Exploratory aspiration in the fifth

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interspace in the mid-axillary line showed plenty of pus. The patient died before a contemplated operation for empyema could be done. A post-mortem the next day showed a pleural cavity, free from pus. An enormous solitary abscess of the liver had crowded the diaphragm upward and so completely occupied the chest cavity that the needle had penetrated the liver.

Besides the mistakes which are made in such cases as those just mentioned, in which there are certain inherent difficulties, and in which an error in diagnosis may be wholly or partly excusable, there is another kind of error which is inexcusable, but nevertheless very common. A mistake of this kind is due to incomplete examination of the patient.

A boy 8 years old took sick suddenly with fever and pain in the right side of the abdomen. He vomited once or twice at the onset. The temperature was about 103, and the pain was persistent. There was slight distention of the abdomen and some unilateral rigidity on the right. The blood showed a leucocytosis. A physician made a diagnosis of appendicitis and an operation was being considered, when a consultant, in a routine examination, discovered an easily demonstrable consolidation of the lower lobe of the right lung. The abdominal symptoms disappeared after the crisis. This identical mistake has been made numerous times and, in some reported cases, the error has not been discovered until an unnecessary operation for appendicitis had been performed. The fact cannot be too much emphasized that the pain of a pneumonia in young children is, as a rule, addominal, and not thoracic.

A woman of 36 came to the hospital complaining of pains in the epigastrium and limbs. She had had a chronic skin eruption several years before. She was the mother of two children and had had no miscarriages. She had menstruated regularly, except when pregnant, until four years before, when the menses ceased. Ten months previously she had had an attack, lasting about a week, in which there was vomiting and severe pain in the epigastrium. A few months later she had had another similar attack. A few days before admission to the hospital she began to have pain in the epigastric region and in the muscles of the legs. She coughed some and thought she had taken cold. She had vomited several times before admission to the hospital.

Examination showed a few brownish scars on the face and right arm. The tongue was slightly coated, the throat negative; the thoracic organs seemed normal; the abdomen was somewhat tense, but insensitive. The temperature was normal. Liver dullness was not increased and the spleen was not palpable.

The pains in the epigastrium and limbs continued for a day or two; then the patient apparently recovered and was about to leave the hospital with a diagnosis of "grip." Just as she was ready to leave she began to have severe pain, as before, and vomited a greenish fluid. Another examination was made, including an examination of the nervous system. The pupils were found slightly unequal and reacted to light, but sluggishly, although reacting well in acccommodation. The knee jerks could not be obtained even by reinforcement. In short, when it was once suspected the correct diagnosis of tabes dorsalis with gastric crises and the leg pains, so common in that disease, was very easy.

Such cases as these and others, which every doctor will remember, should impress upon us the importance of forming a habit of conscientiously making a complete routine examination of every case. Only by doing so can we hope to reduce the sum of our avoidable errors to a proper minimum.

Treatment of Acute Dysentery.

By Dr. Samuel Floersheim.
New York.

The successful treatment of any disease or disorder depends entirely upon the underlying cause of that particular disease. In acute catarrhal dysentery the etiology may be indiscretions in diet, tainted foods, inbibition of cold or icy drinks, irritating substances, such as mustards, peppers, horseradish and other spices, "catching cold" in the abdomen, bacterial infection through the intake of foods, swallowing of sputum or catarrhal secretion which has been infected from inflammations of the tongue, teeth, gums, cheeks, throat and other contiguous organs; increase of the bacterial content of the intestines from that which is normally found in the gut, general infections, such as grippe, and extension of acute catarrhal gastritis.

In the treatment of this disease, preven-

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tion stands as the paramount issue. Where prevention can be ably carried out, a cure is unnecessary. Good and light food in warm weather, care of the bowels, protection from draughts, abstaining from icy foods and drinks are advised. Generally speaking, the treatment of an attack consists of immediate and absolute rest, abundance of fresh air and sunshine, a restricted or abstaining diet, a good cleaning out of both the stomach and the bowels through medication per mouth and rectal enema and irrigation and the administration of such medication as is appropriate to the etiology and the idiosyncrasies of the patient.

By rest in bed is meant a comfortable room with pleasant surroundings, a good bed, plenty of good air, light and sunshine and a bright attendant who is well versed in the arts of nursing, sanitation and hygiene. The severer the attack the more important are these indications.

After the patient has been made comfortable, cartharsis should be induced. The best general medicant for this purpose is castor oil in one or two ounce doses. Should much pain be present, tincture of opium in amounts of from five to fifteen drops may be added, according to the severity of the pain. Feeding of all kinds should be interdicted for at least five hours. Water is allowed ad libitum, but not cold. Sponge baths of very warm water, to which alcohol has been added, do considerable good. Cleansing the mouth, including the teeth, inner surfaces of the cheeks, tongue, hard and soft palate, gums and gargling of the throat with mild antiseptic solutions, usually termed mouth washes, has much to do towards comfort and cure.

After the operation of the castor oil, should there be much diarrhea, the administration of some form of bismuth in powder form or in suspension is advisable. Should there be much pain accompanying the diarrhea, then some anodyne may be added to the bismuth. Should the dejecta be of very foul odor and much gas is passed it would be well to add to the above medication one of the so-called intestinal antiseptics. A preparation that has done good work and is used considerably by me in this field is calomel (combined with very small doses of powdered opium) in small doses (1/10 to ¼ gr.), repeated at first every fifteen minutes for six doses, then every half hour, for six or eight doses, and later on every hour or two as improvement is noted.

If the patient be not exhausted, hot rectal or colonic irrigations should be pressed into service. These should be given two or three times a day in order to wash out the lower bowel in aiding the system to rid itself of the obnoxious material, to curtail the production of and the absorption of toxins and putrefactive products, and in many cases to act as a mild evacuant.

In intractable cases (those running more towards the chronic form) the ipecac treatment has been advised with reports of beneficial results. The treatment consists of making the patient lie perfectly still upon the back and administering per mouth from ten to twenty drops of tincture of opium. An ice bag is placed upon the head, a mustard plaster upon the stomach and a hypodermic of ¼ gr. of morphin given. Not less than forty-five grains of powdered ipecac are then administered, and instructions given that the patient should not be disturbed in any way. The saliva, even though moderately increased in amount, should not be swallowed, and all other conditions that would produce irritation are to be avoided in order to prevent vomiting.

In amebic dysentery, quinine by mouth and more especially by rectal injections is indicated. Tropical dysentery and other special forms as that caused by the "Shiga Bacillus," require special form of treatment. Enemata are better borne warm than cold.

Moist heat to the abdomen is well borne and its beneficial effects soon become apparent. When the acute symptoms have passed off powders containing bismuth subnitrate are of value. Should pain still persist which disturbs the patient considerably, small doses of powdered opium may be added to the bismuth. The opium is also of value should slight diarrhea persist. Where persistent diarrhea is a disturbing factor and there is assurance that the bowels are empty, the disturbing factor being mucous dejecta and tenesmus, resulting from the acute attack of illness, one of the intestinal astringents, as krameria, catechu or kino may rationally be put into the powder.

In a great number of the cases absolute rest in bed, a strict diet, external heat to the abdomen and a good gastro-intestinal cleansing will answer all that is required to effect a cure.

Should the patient, after a few hours, experience considerable improvement, feeding may be cautiously begun. Clear chicken or lamb broth, free from all fats, may be given, and if well borne, hot tea and toast may then

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be tried. No untoward symptoms being apparent, the semi-solid foods, as well-boiled rice, farina, tapioca, corn starch, thin barley, mashed potatoes well thinned by the addition of water or milk, may be allowed, and if well tolerated, then the more staple foodstuffs, as scrambled eggs, custards, jellies (unsweetened), bread, chicken, tender steaks, etc., are next in order, and so on until the usual dietary has been approached.

In a number of cases, after the acute attack has passed over, there remains a persistent anorexia. This condition is most likely due to a disturbance in the function of the splanchnic nerves, either from the shock of the rapid onset of the disease or the degree of infection. This condition of anorexia may also be due to a numbing or paralyzing of the end nerves in the submucosa from the inflammation, and yet we may well consider the general effects of the toxins that have been absorbed into the blood and which may act on the "hunger" center in the brain.

The treatment of anorexia depends upon the cause. It is well to get good excretion by the kidneys in all cases, this being accomplished by the administration of water and alkalies (potass. acetate or citrate). Preparations of digitalis should not be given, as they disturb that which we wish to bring about. General nerve and stomach tonics are indicated. The most important is nux vomica. I believe that it acts better than strychnia. I usually prescribe it in the form of the dried extract with or without the stomachic bitters, gentian, quassia, etc. I think that in these cases, where the effect on the stomach has been quite severe, it would be well to combine some pepsin in the prescription. One may use all of these remedies in liquid form if he so desire. The majority of practitioners believe that pepsin is of no value, but careful observations have shown it to be of especial value in these cases. Hematinic tonics in the severe cases which are often followed by considerable anemia should be exhibited.

During convalescence, fresh air, sunshine, pleasant surroundings and light exercise are valuable adjuncts towards a rapid recovery.

808 Lexington Ave.

To The Medical Council:

Kindly give us an article on the sphygmomanometer, the best make for a country practician.

J. W. Calloway.

Alabama.

Posterior Lumbo-Sacral Curvature of the Spine.

A Result of Faulty Desk Position.

By H. B. Gibbon, M.D.,
Tiffin, Ohio.

(A paper read before a joint meeting of the Hancock and Seneca County Medical Societies.)

That much has been accomplished for the betterment of the condition of our children, in their pursuit of an education, by resecting turbinates, curetting adenoids, excising tonsils, correcting defective vision by properly fitting glasses, and reducing unsanitary conditions of school buildings and their surroundings, must be admitted. Yet I am persuaded that there are other conditions equally imperative that appeal to us as physicians. It is to us that the people look for the prevention of disease and deformities, both mental and physical, as well as for the cure or relief of those that already exist. The prevention of diseases, however, contributes largely to the curtailing of the income of the physician and surgeon.

That we are growing weaker and wiser is pretty generally in evidence. Nevertheless, I fear that, in our mad rush to educate, we permit to pass unobserved developing physical defects that are vital in importance to the future health and comfort of the growing generation.

After careful observation and study during many years past, I am thoroughly convinced that many diseases, both chronic and acute, are due directly or indirectly to an abnormal development of the spinal column, incident to school life. Among these may be mentioned displacements or ptoses of the abdominal viscera and such diseases as are incident to malnutrition or dependent thereon, as indigestion, defective assimilation, faulty elimination with resulting toxines and their influence on the circulation and the central nerve system, as well as their effects upon the eliminative organs; while diseases of the pelvic viscera, as well as hemorrhoids and hernia, find their pathology and etiology traceable to spinal deformity, as we shall try to establish further on in our argument.

To establish, as well as to defend, our position, I will call your attention to the

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physical condition prevalent among the developing girls and the matured womanhood of our land, for it is with these that we come more frequently in contact for advice and treatment for symptoms and diseases due directly or indirectly to this deformity, that is, *Posterior Lumbo-Sacral Curvature of the Spine.*

This spinal deformity so alters the pelvic axis and relaxes the abdominal muscles that they cease to perform their functions as aids in suspending and holding in place the abdominal and pelvic viscera, that ptosis of the contents of both of these cavities is initiated.

It is of prime importance, in entering upon this discussion, that we keep before our vision a picture of the normal contour of the spinal column, and as well the fact *that it does not complete its development until between the eighteenth and the twenty-first years of life;* as well, also, that this deformity is acquired as a result of faulty position in sitting and standing, indulged in during school life, which time comprises about two-thirds of the period of spinal development.

That we may the better comprehend the abnormal, it is fitting that we refresh our knowledge regarding the normal relations existing between the spine and the pelvic bones. We call to mind the double curvature of the spinal column, with its more acute curvature, anteriorally, at the lumbo-sacral junction or articulation, and, as the articulation between the last lumbar with the first sacral vertebra is the last movable articulation in the spinal column, and the articulation between the sacrum and the pelvic bones is an immovable joint, we readily see that any deviation in the spinal column in the lumbar region, either anteriorally or posteriorally, effects a corresponding change in the axis of the pelvis. If we drop a line perpendicularly through the normal body, touching the most prominent point on the ventral or anterior border of the first sacral vertebra, to a point in contact with, or penetrating a plane resting upon the superior arch of the pubes, we find the distance from said vertebral point of contact or prominence to the bisecting or point of contact on the plane resting upon the superior arch of the pubes to be about four inches, and the pelvic angle will be represented by a line drawn from the aforesaid contact on the vertebral prominence to the point of contact with the pelvic plane at the superior pelvic arch. Thus will be established the normal pelvic axis. By drawing a line, crossing this hypotenuse of the triangle thus formed, bisecting it at right angles, we determine approximately the normal axis of the pelvic organs except the rectum, which follows the curvature formed by the sacrum and coccyx.

In the acquired position of the large majority of the people, both male and female (a position acquired during school life, by resting the weight of the body upon the coccyx and sacrum, instead of upon the nates), they change the normal curvature of the lumbar spine distally, in from two to four inches, which change can only be produced by a corresponding change or alteration of the axis of the pelvis, from two to four inches; consequently a change in the axis of the pelvic organs from a normal of about forty-five degrees to a perpendicular. The question very naturally arises, What has this to do with the abdominal organs, or the contents of the abdominal cavity? By directing your attention to the normal lumbar curvature of the spinal column, which acts, in connection with the abdominal muscles, in aiding the mesenteries, as suspensories of the abdominal viscera, we have the key to the situation.

In the changing of the axis of the pelvis from the normal to a plane practically perpendicular, the three or four inches of relaxation of the recti muscles so alters their relation that the action of the other muscles of the abdomen (the transversalis, internal and external oblique, having their anterior attachment to the recti) is changed so that they become constrictors or depressors, rather than suspensory in their action, and, as such, they exercise their force in depressing the abdominal viscera, exaggerating a ptosis already initiated by the loss of normal support as exercised conjointly by the abdominal muscles against the convexity of the lumbar spine, thus throwing the weight of the abdominal viscera entirely upon the mesenteries. Therefore, we have increased tension brought upon the mesenteries, exaggerated by the construction of the abdominal muscles and this increased by the bony walls of the thorax, as they approach the pelvic bones in the exaggerated condition of abnormal sitting and standing. This increased tension upon the mesenteries aggravates ptosis of the abdominal viscera, causing pelvic and intestinal hyperemia by mechanical interference with venous circulation, and thus interferes with normal functioning of the abdominal vis-

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cera, resulting in stomachic and intestinal indigestion, with gaseous distention of the bowels from decomposing and fermentative changes of food therein contained, affording a hotbed for the germination of micro-organisms and the development of their toxines and consequent malnutrition.

The presence of these toxines in the circulating fluids of the body produces pathology, not only in the vessels through which they circulate, but upon the end organs through which they pass in the process of their elimination.

The distention of the intestines from food fermentation and gas-producing organisms (plus fecal accumulation in the colon with its lowered vitality) renders the appendix more susceptible, and the tissues more easy of invasion by micro-organisms, thus endangering the appendix to degenerative inflammatory action, which we are frequently called upon to combat.

How many cases of melancholia and other mental aberrations, as well as physical disabilities, have come under your observation, in which you failed to clear up the etiology, in which you failed to look for intestinal indigestion accompanied by fermentative changes in the alimentary canal, with ever-present toxines, attributable to intestinal ptosis, with flaccid abdominal walls, the result of deformed lumbar spine, with corresponding change in pelvic axis? How many patients have you treated for neuroses, attributable to uterine displacement or ovarian hyperemia, with unsatisfactory results, that might have been, upon more thorough examination, attributable to toxic influences or hyperemia, caused by ptosis due to the spinal deformity?

In speaking of deranged function and pathological changes found in the pelvic contents, accompanied by distorted anatomy, attributable to altered axis of the pelvis, we have directed your attention to those found in the female sex, except possibly constipation and hemorrhoids, for it is to these that a larger part of medical and surgical treatment is applied with only discouraging success.

Much has been said as to the influence exercised by the distention of the bladder in the production of uterine displacement and dysmenorrhea, caused by retention of urine during school life; but when we take into account the relation of the pelvic contents in the normal pelvis, we are convinced that such is scarcely a feasible solution of the problem.

With the normal relation of the parts, in ordinary distention of the bladder, the uterus is slightly elevated and the cervix crowded backwards; but when we change the axis of the pelvis so that the uterus, instead of resting at its normal angle of between forty and forty-five degrees, stands perpendicular, as we find it in those straight backed, or in those in which the lumbar concavity has been reduced to convexity, the over-distended bladder, on account of the superimposed weight, by hyperemia of the pelvic organs plus the weight of the prolapsed abdominal contents above, the uterus being unable to ascend to its normal position, then the force of the distended bladder is in a backward and downward direction, so that the uterus is crowded backward until the fundus falls into the hollow of the sacrum. This exaggerated condition is more frequently found after parturition that has been attended with partial or complete destruction of the floor of the pelvis, which also favors the development of those annoying conditions designated as rectocele and cystocele, and these are most frequently found with more or less prolapse of the entire vaginal wall and uterus.

It does not call for any stretch of imagination nor a profusion of words in argument to convince one of the influence that this deformity exerts in the development of either functional or pathological changes in the pelvic and abdominal organs with their constitutional manifestations, for which we are consulted for relief and cure.

Having thus briefly set before you these very distressing and, at times, at least, a part of them incurable conditions, directly or indirectly, as we believe, the result of distortion of the spinal column and its accompanying influences, acquired during youth, while in the pursuit of an education, the result of improper attitude in sitting and standing, for the relief of bodily tire, and to improper seating accommodations, and as the physicians have assumed the attitude of guardians of public health, we bring this subject before you for your consideration, to see whether it be possible to devise some means or suggest some improvement over the existing faulty conditions, that our youth may be educated and at the same time maintain that healthful physical condition and hardihood that, by right of inheritance, belongs to them.

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On the Formation of Secondary Growths in Glandular Carcinoma.

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In the first place it is necessary to understand clearly what is meant by glandular carcinoma. Carcinoma is a malignant neoplasm. A neoplasm is a new growth developed from pre-existing tissue and following the particular type from which it is developed.

A malignant neoplasm is one that destroys the part in which it grows, substituting its cells for those of the original tissue, and these cells possess the power of germinating and forming another growth when carried by the lymph stream to a distance from the parent neoplasm. In early development the blastoderm consists of three layers: on the outside the epiblast, on the inside the hypoblast, and in the middle between these the mesoblast.

Any malignant neoplasm developing in a part or tissue originally derived from the epiblast or hypoblast is a carcinoma. A malignant neoplasm developing in a tissue originally derived from the mesoblast is a sarcoma.

We have then, carcinoma, a malignant neoplasm which destroys the part in which it grows, and that part (tissue or organ) must have been developed originally in either the epiblast or hypoblast; and, further, the power which has been imparted to the cells originally, and which has caused them to grow and form this malignant neoplasm, is also imparted to all the cells of the new growth, so that any cell, when carried to a distance and lodged in some other tissue can reproduce a neoplasm exactly similar to that from which it came—that is, form secondary growths with all the characteristics of the primary.

There are three principal forms of carcinoma, and the division is made by the difference in function of the epithelium from which they are derived:

First.—Epitheliomata: These are derived from epithelium whose function is protection.

Second.—Columnar epitheliomata: The epithelium from which they are derived has the simplest form of secretion.

Third. — Glandular carcinoma: The epithelium from which these are derived has the power of secretion—that is, of taking from the blood what they require and, by virtue of their protoplasm, forming the secretion of the gland, whatever that may be.

In addition to these functional differences, there are peculiarities in their development: No. 1, epitheliomata, or squamous epitheliomata, as they should be called, are derived from epithelium, the function of which is protection. When epithelium of this kind, for instance, the epidermis, is attacked by the carcinomatous influences, whatever that may be, the deeper part of the epidermis, the reta malpighi, commences to grow downward into the cutis vera, following the line of development of the dermal appendages, and the growth of the neoplasm has no effect on the connective tissue except to absorb it, when it comes in the way. This is entirely different from the intermittent pressure of a tight shoe. Here the epidermis is thickened and a corn is formed, but when you make a section through this corn you find that the increase in thickness of the epidermis has been caused by an outward growth. No. 2, columnar epithelioma, has not been worked out as fully as either squamous epithelioma or glandular carcinoma, on account of the situations in which it occurs, but neither will be further considered in the present paper, which will be confined to glandular carcinoma.

No. 3, glandular carcinoma, will be the subject of this paper.

There is one characteristic of carcinoma which has not been mentioned yet, but applies to all the classes and should be borne in mind. It is the fact that they are all derived from adult cells.

Glandular carcinomata have several features which are characteristic of them as a class. It has been pointed out that squamous epithelioma in its growth follows the line of development of the tissue in which it occurs. Glandular carcinoma does exactly the opposite, as is well shown in photo No. 1. The section is one of the mammary glands. There the carcinoma is in its earliest stage of development; it will easily be seen that, instead of a single layer of cells on the membrana propria, the cells are dividing inwardly and already have formed several layers, while in photo. No. 2 the membrana propria is distended by a mass of cells which in a little further development will absorb the membrana propria now confining them, and spread

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out, forming the fully developed carcinoma. Another very interesting point is brought out in this photo, the short columnar epithelioma of the duct can be plainly made out and is entirely unaltered. It is only the secreting cells that have been affected by the carcinomatous influence. This is a very interesting point, showing the difference in the cells of the duct, and it can be shown further that the duct cells have an entirely different chemical reaction from that of the true secreting cells of the gland.

In 1879 I read a paper before the Royal Microscopic Society of London on my method of treble staining, and showed, in a case of dysidrosis, the sharp differentiation of the two kinds of cells by their color reaction.

Another important difference in glandular carcinoma from the other form is the action of these cells that have been affected by the carcinomatous influence on the fibrous connective tissue of the part. I have said that squamous epithelioma does not affect the connective tissue further than to absorb it when it is in the way; glandular carcinoma, on the other hand starts the connective tissue of the part and causes it to grow and form a framework to support the new growth and also to carry in its trabecula blood vessels for its nourishment and lymph passages, as in any other fibrous connective tissue, and this fibrous connective tissue is formed in a perfectly normal manner.

We have, then, in a glandular carcinoma these points of difference from the other forms:

1. The cells develop under the carcinomatous influence in a manner diametrically opposite to that of normal development and to that of a squamous epithelioma.

2. It exercises an influence on the fibrous connective tissue of the part, which causes it to grow and form a framework to support the new growth and carries in this framework blood and lymph vessels for the nourishment of the new growth.

The subject of this paper is glandular carcinoma, and I will take the mammary gland for an example, as it is so frequently affected and can be so readily examined. The starting of a glandular carcinoma takes place, as I have already stated, by the germination of the adult normal cells into the lumen of the accini until they are filled with it. This is well shown in the photographs Nos. 1 and 2. After they have filled the acini and have absorbed the mem-

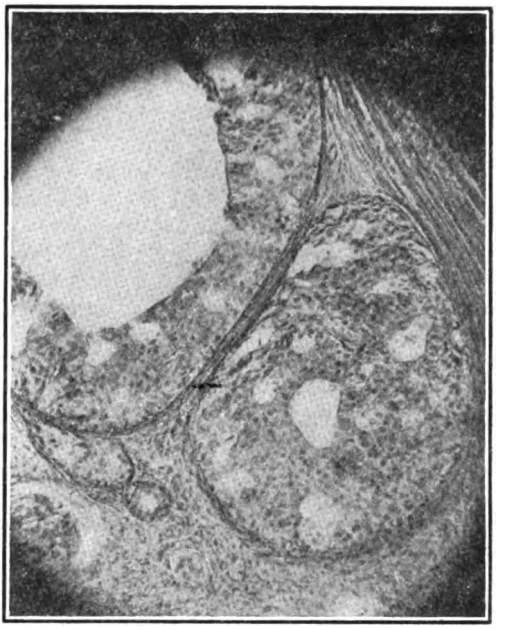

Fig. 1. X350.

Earliest stage of cancer formation, mammary gland. Transverse section of two gland tubes, showing the cancer cells in many layers resting on the membrana propria, these cancer cells having been formed by division of the normal secreting cells which formerly existed as a single layer on the present membrana propria. One tube is nearly full of the cancer cells.

Fig. 2.

All the tubes belonging to one duct are changed into a mass of cancer cells surrounded by a distended membrana propria, which will shortly be absorbed and the cells set free to pass into the surrounding lymph spaces. In the centre of the mass of cancer cells will be seen the duct cells unaffected by the cancerous influences.

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brana propria, any course by the lymphatics is open to them. It will be well here to say something about the great lymph canal system, which often is not clearly understood.

The lymph canal system differs from the blood circulation in several ways. First, it is not a closed system, but is open at one end and the current of the lymph is always from the periphery to the center, and there is no force, such as the heart, to propel the current; consequently, there are numerous valves to keep the current in one direction; the conditions are practically the same; there are spaces in the tissues which are lined by flat cells which gradually pass into a tubular form, and a valve closes the tube and prevents the lymph from going back. In connection with these open ends is the lymph, which fills all the nooks and crannies of the tissues, and which is gradually drawn to the formed tube and past the first valve, which prevents it from going back. Now, if we consider the multiplicity of spaces in the tissues and how easily they can connect with the outside, we can realize how a particle of whatever nature can pass into the lymph stream and on into the blood. To make the matter plainer, let us take a particle of carbon in the air. It is drawn into the lungs as we breathe and passes finally into the acinus of a bronchiole, that is, to the termination of the air tube. This acinus is composed of flattened cells cemented together at their edges. They are, in fact, the expanded end of an air tube. The wall of this expansion is made up of the flattened cells just described, and on the outside of them is a network of elastic tissue; on the outside of this network is another made up of capillary blood vessels; in these is circulating the dark blood which has been brought there to have a fresh supply of oxygen and then carry it on to the tissues that repair it. The law of the diffusion of gases explains how this takes place. In the wall of the acinus at the junction of two or three of the cells forming its wall, there are, here and there, minute openings called pseudostomata, through which the particle of carbon which has been brought to the end of the air tube passes into space in the mesh of the capillary blood vessels, which, with all other spaces in the tissues throughout the body, is filled with lymph, which lymph is always passing on towards the center. The particle of carbon is carried along and deposited most frequently in one of the bronchial glands. Now the fibrous connective tissue all through the body is made up of white fibrous tissue having its interstices filled with lymph; this connective tissue growing with the carcinoma has the same character, and as the mass of carcinoma cells are in apposition with the fibrous tissue, it is an easy matter for a carcinoma cell to pass into the space full of lymph and to travel with it to some place where its further progress is stopped and it remains there and commences the next stage of its life, the formation of a new growth exactly similar to the one it was derived from.

We must now consider what paths are open to these cells after they get into the lymph stream, outside the parent growth. The most frequent route is by the lymphatic vessels to the group of axillary glands; but there is a small group of glands on the road to the axillary, and I think these are frequently overlooked. These glands have different names, but that of pectoral glands seem to me to fit them best. By laying the patient flat on her back and lifting the arm well up, the external edge of the pectoralis major will be slackened, and by getting the fingers under it these glands will easily be found and are frequently enlarged and hard when the axillary glands cannot be felt, so that it is always best to look for them first. There are other lymphatics that follow the internal mammary artery, and this route is sometimes, though rarely, taken and a secondary growth formed in the posterior mediastinum. I have described a case of this kind in the *American Journal of Clinical Medicine* for July, 1910.

Having shown what the changes are in a gland, such as the mammary, when attacked by a carcinomatous influence, and the paths taken by the cells when changed by their influence, it is next in order to show the changes that take place in the gland where these cells find a lodgment and the effect they have on the lymphatic gland and the process of germination by which they completely enter that gland and leave in its place a mass of carcinomatous tissue precisely similar to the primary growth in the mammary gland from which they were derived. In studying these changes in the growth of a glandular carcinoma I found that an interesting chemical change took place in these cells. I have pointed out that under the carcinomatous influences the normal gland cells divide and form layers of new cells, which gradually fill up the

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acini of the gland, then absorb the membrana propria and at the same time cause the normal connective tissue to grow and form a network to support the new growth, and at the same time carry blood vessels for its nourishment, and this fibrous tissue has lymph spaces in it, and when a cancer cell gets into one of these spaces it gets carried by the lymph stream to a compound lymphatic gland (photo. No. 3), where it lodges and there undergoes further changes. These changes are marked by a

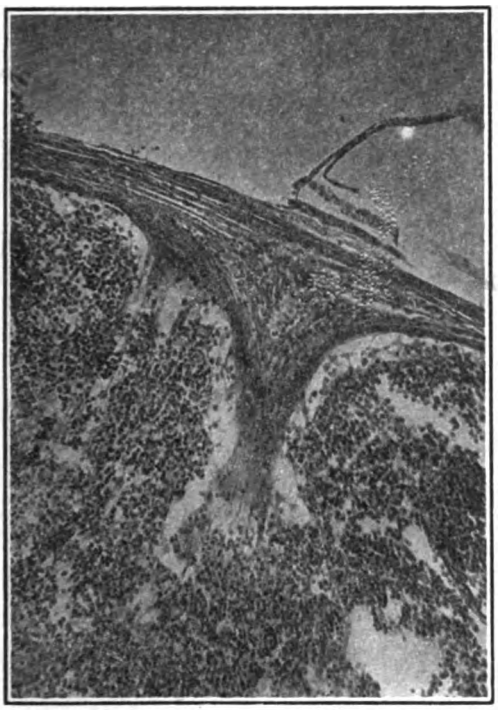

Fig. 3.

Vertical section through the cortex of a normal compound lymphatic gland. Shows the capsule with spaces in it into which the afferent lymph vessels pour the lymph which passes along the sinuses inside and washes out the mature lymph cells, finally entering the afferent lymph vessels at the hilum which carry away lymph enriched by the mature lymph cells.

chemical reaction which is very interesting. The photo shows a small mass of cancer cells which have left the parent growth and have traveled by a lymph vessel to the capsule of a compound lymphatic gland.

Photo No. 4 shows the changes that take place in those cells after they have passed into the lymph sinus and lodged in some part of it. As soon as the cell becomes fixed in its new location the nucleus begins to divide, while the protoplasm of the cell increases, and we have a multinucleated mass. On staining this with my treble stain the multinucleated mass takes on a purple color, the nuclei staining deeply. In photo

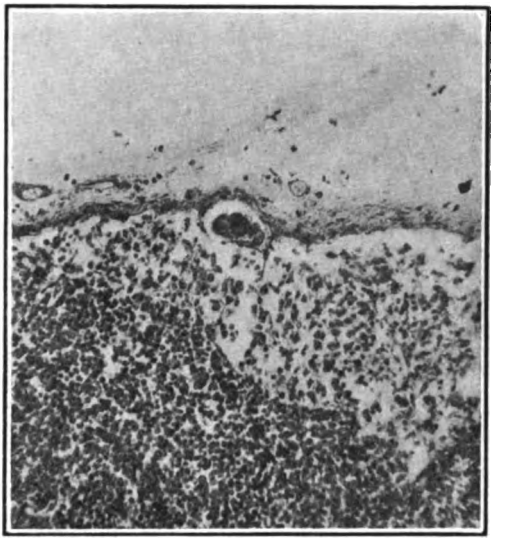

Fig. 4. X220.

Shows the end of the afferent lymph vessel in the capsule of a compound (axillary) gland distended by a mass of cancer cells it has brought from the primary carcinoma in the mammary gland. On the right side of the photograph the cells are seen to be dividing and pushing down the normal lymph gland tissue. This is an early stage of the invasion of a lymph gland to form a secondary growth.

No. 5 this will be shown. On studying this photograph the large multinucleated mass in the center of the field shows at each end a nucleus which has not taken the stain. These two nuclei, one at either end of the mass, are seen to be separating themselves from the large multinucleated mass, and in the section they have taken the green stain. The explanation is this: The large mass formed by division of the nucleus and increase of the protoplasm is in the resting stage. After a time a nucleus and a portion of the protoplasm undergo some change which is shown by their taking the green stain; it is now passing into the active stage and it will cut loose from the large multinucleated mass and move, by the help of the lymph stream and probably by some power of ameboid movement, to some other location, where it becomes fixed and passes into the resting stage. The chemical reaction changes and it takes the purple stain again.

I have studied these changes in a number of cases and find that the condition is similar in all. I read a paper on this subject at the annual meeting of the Michigan State Medical Society in 1889. I have also found this chemical change in muscle fibers which were removed in operations on the mam-

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mary gland where the growth had recurred. Different fibers of the muscles will show

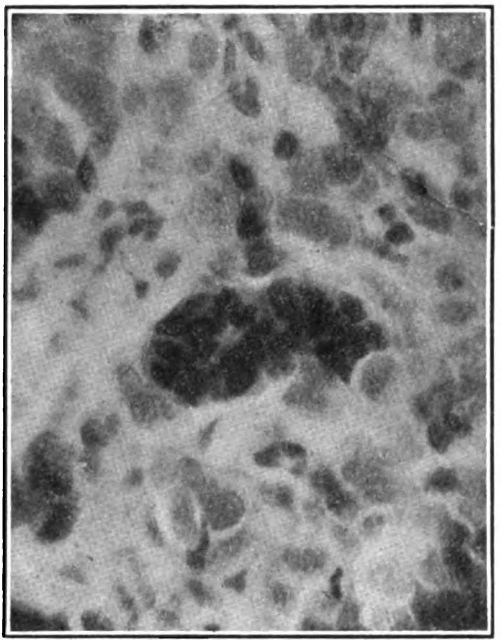

Fig. 5. X660.

Secondary growth in a compound (axillary) gland from a scirrhus carcinoma of the mammary gland. This is the result of differential staining. The large multinucleated cell in the centre is in the resting stage and is stained purple. At either end is a nucleus and some protoplasm which appear to be faintly stained. This is because these cells at either end have taken the green stain, which will take well on the photographic plate, although I used an orthomatic plate, which gives color values correctly. The faintly stained cells at either end of the mass in the center of the field are in the active stage and are cutting loose from the mass.

a different reaction. Those that were involved in the carcinomatous change appeared under the microscope to be normal, but when stained some of them took the purple stain and, on examining them further on, they would be found full of cancer cells. I have confirmed these observations a number of times. What this chemical reaction means I do not know. I had worked on it for a number of years and collected a mass of data which seemed to me to be bringing things to a conclusion and to have an important bearing on the cause of carcinoma, when my chair at the University of Michigan was abolished, which effectually put a stop to my investigations.

The changes in a lymphatic gland go on until the whole gland is converted into a carcinoma similar to the parent growth in the mammary gland and this is confined by the capsule of the lymphatic gland. But the process still goes on and after a time the capsule is absorbed and the carcinoma is set free to invade other structures. Photograph No. 6 shows very well the invasion of the lung, cancer cells can be seen in a lymph channel in the thickened pleura.

There is no doubt that a large number of mammary carcinomata infect the axillary glands and are held there for a considerable time, which shows the necessity of an early operation and clearing the axilla of all glands. I have proved in a number of cases that the glands become infected at a very early stage, but the infection does not pass on from them for a considerable time.

This question of the growth of a cancer from normal adult cells and their formation of secondary growths all over the body is a very interesting one. That something affects a normal adult cell and causes it to start into growth, that it can impart this power to all cells formed from it, and that year after year numbers of investigators

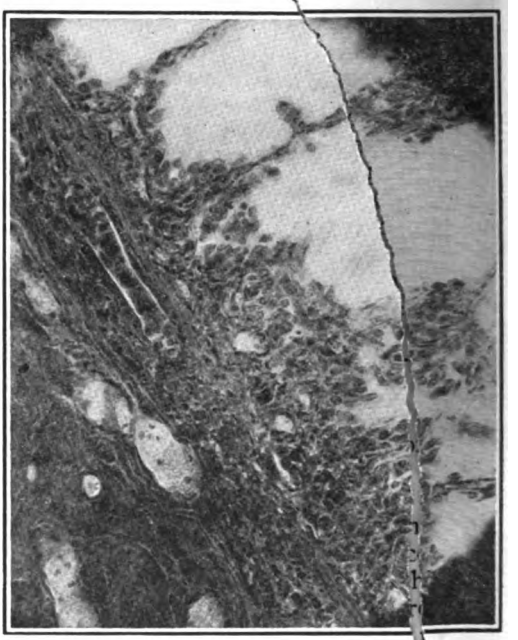

Fig. 6. X220.

This photograph shows the invasion of the lung by carcinoma cells after they have destroyed the structure of an auxiliary gland and have been set adrift to be carried by the lymph stream and lodged in some other tissue. The lymph vessel is well shown in the thickened pleura with a row of cancer cells in it.

are working on this problem and are still as far off as ever from a solution, it is a humiliating fact. That there is a radical difference in the cause is shown by many facts. One is well shown in photo No. 2, where the epithelium of the duct of a mammary gland lies practically unaltered in a mass of cells of glandular carcinoma

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which is confined to the actual secreting cells of that gland, that is, in those cells having one of the highest forms of secretion. In another case the down growth of an epithelioma of the epidermis, starting from a point in the rete malpighii, spreads out and grows sideways and as it grows it is almost in contact with some of the interpapillary processes of the epidermis and yet it has no effect on them.

Then, to make the puzzle more exasperating, take the effect on tissues at a distance. In an epithelioma growing at some distance from a compound nerve trunk we find the perineurium and epineurium very much thickened and the endoneurium

Fig. 7. X130.

This shows a compound nerve cut transversely, the epineurium and perineurium are very much thickened; the endoneudium is also much thickened and has destroyed numbers of the nerve fibrils. This compound nerve was situated at some distance from a squamous epithieloma.

thickened and contracted on the nerve fibrils (photo No. 7). Further on is a pacinian corpuscle with its envelopes notably thickened and by contraction thrown into rugæ or folds. Here the newly formed fibrous tissue has done what it always does when formed under abnormal influence—it has contracted. And yet we find a large nerve trunk and some pacinian corpuscles in the midst of a glandular carcinoma and they are entirely unaltered. I have seen a medium-sized artery in the vicinity of an epithelioma and it showed a typical example of chronic endarteritis, and none of the arteries in the body away from this spot were affected. It must be understood that I am not quoting single cases; I have had the same thing occur again and again.

Then what causes the difference between scirrhus and encephaloid carcinoma? In the one there is a delicate framework of fibrous tissue and an exuberance of cells, while the other has dents, heavy trabeculæ of fibrous tissue and small masses of cells. Are there two influences in the cause of carcinoma, one or the other preponderating?

A case I had some years ago illustrated this condition. A woman came to the outpatient department during my service and, on examining her, I found she had in one breast a tumor about the size of a hazel nut. She informed me that she had had it for seventeen years. I thought it would be better out, so advised an operation and sent her into the hospital. It was a case one could not afford to lose. On making sections and examining it I found that it was a scirrhus carcinoma. It was nearly as hard as a piece of wood. The sections showed an interesting condition. The gradual growth of fibrous tissue in one direction had strung out the cells in rows. A section showed this condition; on one side there was a typical scirrhus; further along the fibrous tissue had increased out of proportion to the cells, and they were arranged in rows; following this further I found that the cells had disappeared and nothing was left but cicatricial or scar tissue, and after the cells had disappeared the capillary blood vessels had also disappeared, so that it was plain that the gradual encroachment of the fibrous tissue had destroyed the cancer cells and the blood vessels by contraction in exactly the same manner that it does in an ordinary scar when it turns from pink to white. Now, what was the cause of this? There is something more in the cause of the formation of a glandular carcinoma than in an epithelioma, as is shown by the fibrous tissue being affected in one and not in the other. Does the preponderance of one part of the cause over the other explain this? If so, will it explain the difference between scirrhus and encephaloid?

From the different observations I have made I cannot think it possible that a parasite can be the cause of carcinoma, for how can you explain the different conditions I have named and attribute them to any parasite we are cognizant of?

If we take the blastoderm and study its

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composition we can find no difference in its cells. Taking the epiblast, for instance, the cells are all alike, and we can, by staining or other methods, find no material difference in them; yet every one of these cells is ordained to do a certain thing and it will do that and nothing else under normal conditions until it arrives at its final adult stage. Now, whether it be protection or secretion that it has to perform, it will do that and nothing else. We are ignorant as to how it does it and what its life cycle is, but we know that, if this cell is given normal nutrition and its environment is normal and its regulating by the nervous system is also normal, it will go on carrying out its function, whether that be protecting tissues under it or taking substances from the blood and forming its secretion—it will do that and make no mistake about it. This goes on for a certain time, of which we know practically nothing. Then something happens to the cell and it commences to do something abnormal, and that is shown by its germination and forming a number of cells of its type and each of these cells is imbued with the same property that was given to the first cell when it started into abnormal germination.

We have so far two similar conditions brought about by this influence. But now the scene changes. On one hand these cells continue to grow down into the tissue under them, which they had been protecting, and they have no effect on this tissue beyond absorbing it when it is in their way. A cell from these down-growths gets carried to a distance and lodged there, when it immediately begins to germinate and produce a mass of cells similar to the original, and not only similar but in some cases having degeneration, such as horny change or mucoid degeneration, which existed in the original.

The other form, starting from secretory epithelium in the first place, grows inwards —that is, in a direction diametrically opposite to that of the gland it springs from in its development—and then shows a most important difference in that it causes the fibrous tissue it comes in contact with to germinate and form new fibrous tissue for a definite purpose of its own.

We have, then, to find something which will have the power of discrimination in these two cases. It seems to me impossible that this could exist in any parasite or cell such as have been described. It must, then, reside in the cell itself, and this seems much more probable, as it would be a misdirected energy exercised in a worn-out cell. Taking this view of the condition, if we could find out the cause starting the adult cell into growth we should not require anything further, as it would be supplied by the cell itself. I have long thought this the most feasible view, but the difficulty of proving it is very great. The chemical reactions I have described have an important bearing on this view, but it is almost impossible to get a case where one could remove a small portion from time to time, and all pleading for scientific investigation has, unfortunately, little weight.

There is an interesting condition which occurs in the mammary gland and is not at all uncommon, that is, fibroma, or, as it is generally called, intercanalicular fibroma. This change consists of a growth of fibrous tissue around the gland tubes which gradually contracts and destroys them. In connection with this change there is another which is rare—at least is not often discovered, as only a small portion of the enlarged gland may be affected, and it is a tedious and difficult matter to go over a large tumor and find it. That is, a carcinomatous change. I think that is much more common than is generally supposed, and is not often found on account of the difficulties just mentioned. The most interesting thing in connection with this change is the fact that the fibroma, a benign growth, does not produce metastases or secondary growths. In any definition of a malignant neoplasm I take it that this is one of the features of a malignant neoplasm. As soon as this fibroma, or rather a portion of it, takes on malignant growth, it then produces secondary growths. This would seem to be an argument against the parasitic origin of carcinoma.

In July, 1893, I wrote a paper on the parasitic nature of carcinoma which was published in the *American Journal of the Medical Sciences*. In it I described the experiments I had made and gave the formulæ of the differential stains I had used and the conclusions drawn from the experiments. Since then I have read several accounts where men have gone over the same ground and have described cells they have found, but, as far as I can see, they have not succeeded in connecting these cells with the formation of cancer any more than I did.

There are so many points to be considered in the study of cancerous growths

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that it is difficult to decide what feature should be taken as a starting point. If we take the view that the cell itself contains the influence that causes the adult normal cells to germinate with a new power in their protoplasm which they can impart to all cells formed by this new power, how can we explain the difference in the action which, in the case of protective epithelium, has no effect on the surrounding connective tissue, while in that of secretory epithelium the normal connective tissue is at once started into growth with a definite function to perform and this tissue develops in a perfectly normal manner? Now, fibrous connective tissue is always ready to respond to any call where its services are required. Take a superficial abscess. When this has discharged its pus contents and the slough has been removed a clean cavity is left. This is filled up in a short time by young connective tissue and a scar is left. But if we take a chronic ulcer of the leg which has existed for a long time and make a vertical section through the ulcer and the tissue on the side, we find layers of embryonic tissue showing where the normal connective tissue has germinated and grown up; in an endeavor to fill the cavity of the ulcer it grows until it meets the floor of the ulcer; there it comes in contact with something which prevents its going further in the healing process, and we find dense fibrous tissue, which cannot get any further. There is something in the ulcer which inhibits its growth at that point. And if we examine the squamous epithelium of the epidermis, which has been destroyed by the ulcer, we find that in its endeavor to cover the part denuded it cannot do this and it frequently grows down by the side of the ulcer into the cutis vera for a considerable distance.

I read in a recent work that carcinoma generally started from chronic irritation. The condition described above is a typical example of chronic irritation, but the influence that forms a malignant new growth is wanting. I have worked for many years on this subject in every conceivable condition and I have studied every point in the problem and I cannot now imagine what kind of material there is on this earth that can account for all these varied conditions.

To The Medical Council:

I might answer all three of your questions by asking you to give the best non-surgical treatment for appendicitis. This disease has an important prominence in this city. S. S. Still, M.D.

Century Building, Des Moines, Iowa.

The Deluded Draught Delusionist.

To The Medical Council:

In the April Council Dr. Brady uses two pages to tell us that the "draught delusion," as he calls it, is dead. Note that I do not say he uses the space to prove it, for his article seems to be entirely ex cathedra, and without argument. But, now as to the "draught delusion."

First, let me say that, personally, I spend a good part of my time all winter sitting under an open window and find it beneficial, in spite of the fact that everyone who comes in says I will catch my death of cold. This to show I am not a hot-house plant myself.

On the other hand, a draught is a very real thing, and is, indirectly, the source of much of a doctor's income. If a patient comes to you with a myalgia in the lumbar region, placing his hand on his back in much the position shown in a well-known advertisement for kidney cure, make a few inquiries. Often you will find he has been working or sitting in a hot room, which caused more or less profuse perspiration, and his location was such that constantly or periodically a draught of colder air blew across his back. This myalgia, lumbago or what you choose to call it, will persist as long as those conditions persist.

Again, your patient may go out in the coldest weather, wind blowing a hurricane, and, though he may freeze, he is not likely to catch cold. Or, let him be confined in a warm room, for a good part of the day, and if he is properly dressed, both there and when he goes out, he does not catch cold, especially if plenty of oxygen is supplied. But, let a draught of cold air blow on his unprotected head for any length of time, while he is in that hot room, and he will need his handkerchief the next day, and may suffer great inconvenience and disability from coryza as a result.

A myalgia in the muscles of the neck may come from a draught in the same way as in the muscles of the back.

Dr. Brady should learn that there are many inflammatory disturbances where there are no germs present, and many times, most times, when characteristic germs are found and are active, they owe their introduction to the lowering of the vitality, in some part, from a physical cause and, in some cases at least, this physical cause is the draught—which is not a delusion.

If Dr. Brady says that a man who spends

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all his time out of doors and is not dressed too warm, is not susceptible to draught, be may be right; but these are not the conditions under which most of our patients live, and in many cases they are unable to alter these conditions.

I hope I may be pardoned for using several times the unscientific expression, "catching cold." I am writing now to be understood and not to be ultra scientific, and the expression is one which will lead to no misunderstanding.

J. Leverett, M.D.

Yonkers, N. Y.

Hysteria and Its Remedy.

Editor Medical Council:

In the March issue, Dr. Benjamin Edson's case of Hysterical Mania "reminds me," as Lincoln would say, of the case of Mrs. J.

Seven years ago I was called out in the night to see a lady, who was reported to be in a dying conditon, and found a case of Hysterical Malingering.

Apparently Mrs. J. was raised a pet; plainly she was looking for sympathy. Catching her eye, it dropped—and the diagnosis was easy.

Friends were reassured of her recovery, and the doctor departed wiser but not enriched by fee.

Later another desperate call came, and in the night, of course. Grasping the trusty hypo. case the hero rushed to the rescue. One-tenth grain of apomorphine wrought a miraculous cure—"to stay cured," as our adv. brethren would say.

Was the treatment justified?

With three doses of this remedy I have killed the alcohol habit and no relapse since last year.

But be careful. If in doubt try a hypo yourself, and you will have the very best knowledge of the drug. In most cases 1-20 gr. is enough.

John T. Foley, M.D.

Lewistown, Mont.

Some Hints in Minor Surgery.

To The Medical Council:

It is the province of the country practitioner of medicine to do a certain amount of surgery.

Some of the cases demand prompt treatment, and he who treats these injuries learns from experience that some wounds heal more readily than others of a similar character, and the cause or causes of this unexplained pathological fact have often caused him anxiety and furnished food for reflection.

The term débris in this paper is limited to railroad and machine shops, mainly, while merely dirt is as it is found upon the highway, farm houses and about out-buildings. Having had an experience of years in railroad accidents, during which time there was scarcely a week that some accident or lesion did not occur that required treatment, I have been led to the conclusion, notwithstanding grime and grease, coal dust and smoke, fatigue, loss of sleep, irregular meals and other vicissitudes, wounds of railroad men heal more readily than the same class of injuries when inflicted upon the highway or upon the farm, or on the streets or alleys of our towns and cities; because the surface of our earth generally is the receptacle of all kinds of execrementitious matter, poisonous microbes and ptomaines to a greater extent than is possible along railroads and in machine shops, and like places, where cinders that have passed through fiery furnaces cover the ground from time to time, rendering them obnoxious to the life of micro-organisms, while sand and gravel along the tracks have been exposed to rains, freezing, solar heat and the violent agitation of the winds and trains with great velocity, that should greatly aid in sterilizing and destroying septic material.

Physiologically, agriculturists and men outside the railroad ranks should be better risks and recover from lesions more rapidly; but practically I have not found it so. Upon our streets, highways, farms and about our dwellings there exist disease germs more poisonous than the fateful upas tree of Java; and I feel warranted in forming a more favorable prognosis in the railroad than in the agricultural class of injuries.

One of the first requisite measures in the treatment of any form of serious injury is cleanliness. Often there is so much grime, grease, pitch, tar, smut, dirt or detritus that it must be removed before a correct diagnosis is possible.

For many years *benzine* (the name benozol is more scientific) has been the most satisfactory detergent and solvent for the removal of foul or noxious matter that I have been able to find. It being antiseptic and free from irritating or painful effect, having rather a calming influence even upon

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raw surfaces, it can be used on the most sensitive portion of the body, and by its slightly sedative action aids in the reunion of atom and capillary to restore the normal function of structural lesions.

Solutions of carbolic acid have little influence in the destruction of pathogenic micro-organisms and are not free from unfavorable systemic effects. Years ago the writer had to amputate a digit because of the toxic effect of phenol dressings.

Bichloride of mercury has never impressed me as a safe and reliable germicide, even when sufficiently diluted to be non-corrosive.

I am now, and have been for the past few months, using a chemical product called chinosol in about the same strength that lotions of corrosive sublimate are used, and for practically the same class of cases, and find it a very efficient agent, non-poisonous, causing no injury to the tissues, and free from odor. One part of this agent triturated with twenty parts of boric acid forms an excellent dusting powder for a dry dressing; and whether used in this way or in aqueous solution can be safely intrusted to nurse or attendant—something that cannot be said of some other antiseptics that may be found in many of our homes, a covert menace to the health and even life of the unwary.

Tuscola, Ill. JAMES L. REAT, M.D.

Teach the Young.

To THE MEDICAL COUNCIL:

Doctor Bogart's article in the March COUNCIL, citing the disastrous results of not instructing a young girl in regard to her menstruation, moves me to write of a family in which the opposite plan has been followed. Chance has made me acquainted with many members of the Mormon faith in Chicago, and, in spite of all the muckrakers have said in the magazines of late, I am glad to say that the Mormons of Chicago would be a welcome addition to any community in the country—unless that community be too blinded by prejudice or too vicious to desire clean home life in its midst.

One of these Mormons, who is a business man and also an M.D., has a son just attaining his majority and a daughter in her later 'teens, and happier, sweeter and more loyal children it would be rare to meet. The boy has been the companion of his father and has consulted his father on everything that has come into his life. He has looked to his father as the proper source of information on all sorts of questions, including the sex relation. The boy understands how he is made and for what. He knows the meaning of the impulses which no man can escape, and he knows the danger lines and the bounds which religion and law set against the sex instinct. I know the boy well, but he does not know that I know the thoroughness of his preparation to meet the dangers of life. He is a boy to be loved and trusted.

The girl has been likewise instructed by her mother, and the knowledge has not made her abnormal in the slightest degree. These parents have done their full duty. Would that their example could be followed in all of our homes.

E. P. S. MILLER.

2001 West Lake street, Chicago, Ill.

Cabbage Leaves in Burns.

To THE MEDICAL COUNCIL:

As I have never to my knowledge seen any report in any medical journal on this subject, I desire to report in THE MEDICAL COUNCIL that I have used cabbage or collard leaves as dressings for burns during the last twenty years of my practice, and have never failed to be pleased with their anti-inflammatory effects. Have attended cases burned from lower extremities up the side and back to the scapular region of shoulder and neck, and have found them very convenient in covering large surfaces as a dressing. I use them mainly in the suppurative stages, when the cuticle and charred flesh are peeling off. I wilt or "coddle" the leaves, saturate them in albumen or castor oil on applying them.

I am now attending a dreadful burn, and it would please you very much to see what a fine dressing the leaves make and what a delightful antifebrile effect they are having. I apply once a day, or at every dressing, and the fresher the leaves the better. They are absorbent, antiseptic and antiphlogistic, and I am willing to be held responsible for what I say in favor of their beneficial effects as dressings in burns.

E. S. ABNY, M.D.

Blythewood, S. C.

To THE MEDICAL COUNCIL:

I wish to commend to your readers the article from the pen of Dr. F. R. Burdeno, published in the January number of THE COUNCIL, "A Plea for Medical Gynecology." It strikes more directly at the truth than anything I have read on the subject.

A. C. Ewing, M.D.

Mercantile Block, Salt Lake City, Utah.

Relative to your queries in the April COUNCIL will state pneumonia, la grippe and malaria, in some form, are the most prevalent diseases in my practice, and that fractures and dislocations are the surgical conditions in which the general family physician most needs practical instruction.

J. W. Abernethy, M.D.

Woodland, Miss.

To THE MEDICAL COUNCIL:

In reply to your question, "What subjects would you like treated in the near future in THE MEDICAL COUNCIL?" I wish that some one, competent to do so, would discuss the present status of preventive medicine as a specialty; the facilities for special training; the fields for effective work, educational, in research, or administrative; the municipal and national demand for specially trained men.

D. E. FORD, M.D.

Morley, Colo.

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The Business Side

OF MEDICAL PRACTICE

While we, as physicians, desire to be scientific students and practitioners of medicine, yet we desire also, for the welfare of our dependent ones and for the sake of our standing in the community, to secure a fair compensation for the services we render to our fellowmen.

On the Philosophy of Investment.

EDITOR MEDICAL COUNCIL:

In the copies of THE MEDICAL COUNCIL that come to my office there is no department I read with so much interest as "The Business Side."

For many years I have paid special attention to that side of medicine. In my immediate family, within the next few years, I will round out for that family just a century in the practice of medicine. Had they applied some business principles they might have accumulated and left enough to give me a medical education, which I had to pay for myself. Now that it is paid for, and I have succeeded, I am more than pleased that it was necessary for me to hoe my own row. However, this does not suggest that it is a good idea for medical men to neglect the business side of medicine. In fact, I believe that it should be studied as carefully as any branch of medical science. And when it is studied and when it is understood, there will not then be so much said about doctors being such poor business men.

In investigating the medical men who have succeeded in business I find that the number averages up just as well, if not better, than the men from any other profession. My studies lead me into intimate assocation with business men of all kinds and I find that there is one plan of success for all business men. The banker to succeed, the merchant to succeed, and the professional man to succeed, must apply the same principles.

It takes the same psychology to sell professional services and build up a practice as it does to make the sale of a bill of goods or other commodity. That is too long a subject for the few lines that I intend this letter to convey, but I will be pleased to go into it further should any reader of this letter desire it.

Your investment warnings are timely. Right here in this city I know of medical men who are always biting at some game of which they know nothing. The mine, the oil well, rubber in Mexico, Sumatra, etc. A few years ago I had a piece of land in this State that was to be sold for $8,000. I tried to get eight medical men to go in with me and buy it. It contained one hundred and ninety acres. The best I got for my trouble was not much. I disposed of my option, and three years later I was offered just ten acres of this same place for $20,000. The property to-day is worth over $50,000, and it is not for sale.

While engaged in this work I interview many bankers in regard to stocks, bonds, mortgages, and the means of raising money on real estate and other securities. I found many of these men were not overly familiar with the different names of bonds and the financial terms used by financiers.

Within the past five years there has been a world of education going on in the way of finance. Nevada and California have had much to do in that educational work. I am sorry to say that it has been an expensive campaign—to the educated. Mr. Rice tells in April *Adventure* what becomes of most of the funds paid for that education. It is an interesting story and should be read by every physician.

In the letter of Dr. C. C. Carter, of Lancaster, Ohio, in your March number, he sounded the keynote in successful finance when he made the statement that "Safety of principal is the supreme consideration, let the interest be ever so small." That is a fact, but I wonder how many investors a man could get if he had a gilt-edge business enterprise, with speculative profits, if he offered to furnish each investor with a guarantee, issued by one of the most reliable financial institutions in the country, that they would return the full amount invested within three years if the investor was not perfectly satisfied with his investment. I say I wonder how many investors would take up such an enterprise. Is it that they fear to make an investment unless there is great element of loss? Does it require the great element of loss to stimulate the investors to part with their coin, by reason of what is called, in the parlance, "pulling advertisements"? It is actually remarkable what results have been obtained by these "pulling ads." They have caused the worst sort of wild-cats to be oversubscribed within two weeks, in many instances. Unless medical men become educated to guard the "Safety of Principal," as promulgated by Dr. Carter, they are very likely to become losers.

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That there are good investments to be made is well known to every man who takes the trouble to look into the matter. There are investments that are just about as good as the bank guarantee as I mentioned above, but do the members of the medical profession want that kind?

Yours cordially, and always for the best there is,

CHARLES N. ROSS, M.D.

2808 California street, San Francisco, Cal.

Personal Experience in Stock Investments.

EDITOR MEDICAL COUNCIL:

Only since the first of the year I have been a reader of THE COUNCIL. I enjoy reading the advice to investors.

My observation has been that whatever is such a "good thing" offered to us every day would not have to be peddled were it really such. Good investments never reach the hands of a promoter or an agent to sell on commission.

Every day some one comes into my office to sell life insurance stock (mostly) or some other equally impossible junk; to all I turn the same deaf ear, and in consequence I have, in fourteen years, lost but $46, which I ventured on a banker's judgment and against my own.

I made a steadfast rule, from which I never waver: "Never invest in any undertaking or corporation wherein you do not have a voice in the management or know personally one or more of the board of directors who does." Second: "Invest only in well-established corporations paying a legitimate return, though small, and one which will gradually increase in value, free from speculation and market fluctuations." Third: "Bank stock is, by all odds, the best." Fourth: "Always keep in debt about one year's income."

In fourteen years I have never been out of debt longer than a month or so at a time. Stock which I borrowed the money to buy at a time when the amount borrowed was equal to what I was already actually worth, now pays 12 per cent. annually, and is worth two dollars for one that it cost.

Since February 1st have used your account book, and at night when I retire I have the satisfaction of knowing that, at any time in the day or night, I can render, on a moment's notice, a man's bill, which will save many a dollar over the old method of being from three to six weeks behind in posting.

Two other physicians are using it at my suggestion, and I hope to get many others to take it up.

CHARLES R. BIRD, M.D.

Greensburg, Ind.

Irresponsible Pecan Promoters.

Poulan, Ga., April 3, 1911.

EDITOR MEDICAL COUNCIL:

The Pecan Promoter is actively at work in many parts of the country, and numerous inquiries come regarding them to all the officials of the National Nut Growers' Association.

So little information is at command regarding many of the companies soliciting business that replies are often of a negative character, coupled with the advice that *sterling integrity, up-to-date and practical horticultural experience,* as well as *good business ability,* are essentials in the successful development of these orchard propositions.

A few suggestions for judging the credibility of these flowery descriptions of easy fortunes may help your readers to arrive at a proper estimate of their character.

While pecan growing has unusual attractions for profit and a permanent revenue, and the glowing accounts of the promoters are based, in most instances, on authentic incidents, still the general impression is misleading.

Because one tree in a particular year, when all circumstances were favorable, and the tree was twenty-two years old, produced 638 pounds of nuts, is no reason why that largest crop the tree ever produced should be taken as the average crop for that tree, much less for the average orchard yield. Neither is it right to make the mistake, or allow a typographical error, possibly, to say that this phenomenal crop was produced at the age of sixteen years, as stated in a prospectus just examined.

Because a few nuts of the Schley variety have been sold to some admirer at the rate of one dollar per pound is no reason for growers to count on getting that price for this variety when it is produced more abundantly, much less for any inferior varieties.

Because a Schley or any choice variety will produce nuts true to name, it does not follow that all trees of that kind will

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be profitable, for all kinds of trees, from the choicest specimens to the worthless stunts, rescued from nursery trash piles, are being planted. Granting that they are genuine, true to name, and choicest varieties, only disappointment and loss will follow such planting.

Then again, some of the finest varieties are circumscribed in the territory suited to them and should not be planted generally for commercial purposes.

However, the important fact that profits in fair measure come from the regular and abundant yield of crops, rather than from exploited incidents, should be kept in mind. The skilled orchardist knows what to select and plant. He gleans from the stock of reputable nurserymen the great bulk of the best stock now produced. The promoter and inexperienced get what is left.

Some companies claim to grow their own trees. This requires the same integrity and skill which we demand of the horticultural specialist.

This industry is still too young for even the best informed to have specific data as to general orchard results. Of all the thousands of acres of commercial orchards none are of full bearing age, and they will not be for several years to come. Aside from the irregular and conflicting data furnished by the inferior seedling orchards our faith is based on the results yielded by isolated individual trees, but these records, when consistently measured and due allowance made for ordinary horticultural contingencies, furnish ample assurance for the extensive plantings, provided they are safe-guarded as above outlined.

The mere fact of irresponsible parties being actively engaged in selling orchards confirms the public sentiment which recognizes particular merit in the business.

Be sure you intrust your money into competent and responsible hands, and make up your mind that the trees require from eight to ten years to reach profitable bearing, and you will find both pleasure and profit in the investment. Notice how quickly the past ten years have passed and you will see how easily you can wait.

J. F. Wilson, M.D.,
Secretary American Nut Growers' Association.

To Remove an Adhesive Plaster.

Rub lard or other available oil into the plaster and wait. It can be easily removed.

Sterling Debenture and its Flotations.

Any reader who imagines that we have been rather severe on the Sterling Debenture Corporation, of New York, and the various flotations which they have been selling—Telegraphone Co., Bartica Rubber, Oxford Linen, Telepost, and others—should by all means read an important article in *Munsey's Magazine* for May, entitled "Is This the Kind of an 'Investment' You Want?" He will then be convinced that "not half has ever been told." If you have any idea of even noticing the enticing literature sent out by the Sterling gang, just ask them the following questions:

1st. Give a full statement of the present condition of the concern whose stock you are offering.

2nd. What is the contract you have with said concern in regard to selling the stock—that is, what per cent. of the receipts do you retain as a commission for selling?

3d. As you have now been in business for quite a number of years and have marketed the stock of many concerns, will you please refer to one or more of such concerns that have proven successful—not magnificently successful—as foretold in your lurid circulars, but reasonably or moderately so, as, for example, giving fair dividends and a good showing of tangible property in the hands of the company to represent the investment?

You will probably get no further answer, or, if any, merely a lot of generalities, evading all important facts.

It is the prophecy of the writer that, if the "Sterling" concern should remain in business fifty years longer they would still continue to keep up about the same record they have maintained in the past. We believe they are following the policy they deliberately adopted at the beginnig of their career.

We earnestly advise, if you receive any more circulars and stock propositions from them, that you send the entire set, envelope and all, to the office of the Postmaster-General, Washington, D. C., with a request that he investigate.

Delusive Land Propositions.

In Seattle, Wash., April 1, Clarence Dayton Hillman, the multimillionaire real estate man, convicted of using the United States mails to defraud, was sentenced to

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two years and six months' imprisonment in McNeil's Island Penitentiary, and to pay a fine of $5,200 and costs.

Hillman amassed his fortune, estimated at $7,000,000, buying cheap uncleared land on Puget Sound, platting it as townsites and selling it on instalments at high prices to homeseekers.

Just the same kind of work is going on in many parts of the country—notably on Long Island, along the New Jersey coast, in the Gulf States—particularly Florida and Texas—and many other places. Of course no person in his senses will buy remotely situated land which he has never seen simply from the representations of lurid descriptive circulars sent out by persons whom he does not know. But, then some people haven't any sense.

W. G. Motley & Co.

Early in 1907 we exposed the methods of this supposedly respectable concern of mining sharks, and they tried a mild bluff regarding a possible suit for damages.

Well, the final sequel is that early in April of this year their office at 32 Broadway, New York, was raided by the Post Office Department on the charge of using the mails to defraud, and the officers found the most extensive "sucker" list they ever saw, consisting of about 200,000 names.

A subscriber in Waxahachie, Texas, sends us a *very* confidential letter from a New York party, with a Southern office in Atlanta, Ga., offering a lot free at Westhampton Beach, Long Island, just to "secure the co-operation of a few desirable persons like yourself, whose names will help the enterprise with which we are associated."

Of course this is a fraud. The United States Government raided several gangs operating in a similar manner in the same locality some months ago. We wonder that any one should have the effrontery to attempt to operate that game again.

Don't buy or accept distant land or lots from persons you do not know. There is always a trap to them. Forward the "literature," with its envelope, complete, to the United States Post Office Department, Washington.

The proprietors of the Western Magazine Publishing Company write us a kindly letter, objecting to the reply given a correspondent in our February issue regarding the advisability of investing in the stock of their company. We wish to assure the gentlemen that this was intended to be general and not specific as against them, but was in line with the advice we have all along given our readers not to purchase stock in any publishing company in the course of which we pointed out some of the most prominent Eastern publishing houses and advised against them as well. We believe the gentlemen mentioned above to be honorable business men and conducting an honest house, but we believe that kind of stock to be too uncertain for physicians' investments.

Doctor, when you post yourself on the fraudulent get-rich-quick schemes for the purpose of saving your own money you have done only one-half your duty. You owe it to your patrons, your neighbors and to yourself to inform your entire community, so that the "lobster palaces" in New York and Chicago may have some of their gilded patronage cut off and the money kept at home for honest and productive uses. Address your people, both publicly and privately. Enlist the interest of your local editor and of all influential citizens.

DeFuniak Springs, Fla., March 15, 1911.

To THE MEDICAL COUNCIL:

I noticed in your editorial under the caption of "Warning," you pay your respects to Florida land sharks and swindlers. This friendly warning is timely.

At this moment (March 15), 3,000 "Northerners," I came near saying "suckers," are camping at the "Everglades," waiting to "draw" their portion of watered stock.

Companies form, usually in the North, and come down here and buy cheap "cut over" and "watered land," and cut it up into ten- and twenty-acre lots, and sell to "suckers" at exorbitant prices.

I frequently get letters from brother physicians and invalids asking about these sharks, and their reliability, etc. I give to these correspondents the simple facts and always advise them to come and investigate for themselves.

I came to West Florida from Indiana eighteen years ago with hemorrhage from the lungs, and all broken up in health. I have had no hemorrhage for twelve years, and have increased my weight over fifty pounds. I am sixty years old and still do an active, lucrative business.

West Florida is a fine place in which to practice medicine for the Southern people will take medicine and most of them handle money and are very liberal with it. The timber and turpentine industry, with an all-the-year-round range for stock, coupled with a reasonably good farming country, makes this a very desirable place to do most any kind of business. DeFuniak Springs occupies the highest point in Florida and is a beautiful, modern city, on L. & N. R. R., eighty miles east of Pensacola, and is quite a health resort, especially for consumptives. We enjoy a splendid climate, with few annoying pests.

Mr. Editor, I want to thank you for the kind advice you are giving us in THE COUNCIL on many business lines.

Too many doctors live on "Easy Street" and are hypnotized by get-rich-quick schemes.

Now, in conclusion, there is plenty of room in Florida to make money in various ways. If some enterprising doctor, a little up on surgery, would start a sanitarium in DeFuniak Springs, he would make it profitable, for the most of our surgical cases go to New Orleans.

G. P. Morris, M.D.

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To The Medical Council:

The enclosed ad. was taken from your March number and I wish to state that the same ad. has been appearing in "The Automobile," of New York for the past four or five months and I bit on it. However, I held the money here at the express office until the coat was examined by an expert, who stated that it was a coat that should be purchased anywhere for $25.00. It was the rankest fur you ever saw, and looked like dog skin.

Hoping that none of the profession have been attracted by the notice, I beg to remain,

Yours respectfully,

A. O. Olmsted, M.D.

Green Bay, Wis.

[We are glad the doctor writes his experience as above. When the advertisement was submitted the Editor, doubting its reliability, called personally to see the goods. He was shown coats and other fur goods that seemed good value for the money, and was assured that these were the garments actually sent out. Also, that the purchaser was not expected to pay for them until he had inspected them. Also, several letters were shown from physicians and others who had received goods and were pleased. As the advertisement was carried by several high-class magazines we felt compelled to accept it, although we published an explanatory remark, advising no payment until goods were inspected.—Ed.]

BEST IDEAS FROM RECENT LITERATURE

The Influence of Colloidal Protection on Milk.

For many years past the addition of certain substances, such as gum water and thin gruel, to cow's milk, has been known to increase its value as an infant food, but the practice was purely empirical. Generally the favorable influence was believed to be limited to prevention of the large, tough curd characteristic of cow's milk. Quite recently this subject has been scientifically cleared up. The beneficial effect is proven to be colloidal and to improve the digestibility and absorption of both casein and fat, as well as to prevent the formation of indigestible curds and their consequences.

Doctors Jerome Alexander and J. G. M. Bullowa, New York City (*Jour. A. M. A.*, October 1, 1910), detail the subject, both from the laboratory and the clinical point of view, from which paper we abstract as follows:

With the aid of the ultramicroscope which brings into visibility particles whose size approximates the theoretical molecular dimensions it has been demonstrated that colloidal solutions occupy a sphere midway between coarse mechanical suspensions and true crystalloidal solutions. The pediatrist is interested only in the *stable* or *reversible* colloids, or hydrosols, which do not readily coagulate and redissolve after desiccation at ordinary temperatures (e. g., gelatin, gum arabic). Stable colloids are not only insensitive to most electrolytes, but they possess the striking and very important property, even if present in surprisingly small quantity, of being able to stabilize and protect unstable colloids from coagulation and permit them to redissolve after desiccation. The digestibility or desirability of a food cannot be expressed solely by its chemical analysis, much depending upon its colloid-chemical nature.

The addition of protective colloids to cow's milk stabilizes it and makes it act more like mother's milk when treated with acid and rennin. In fact, if sufficient protective colloid be added, coagulation of the casein in the stomach may be entirely prevented, or at least the coagula kept in a very fine state of subdivision. Sodium citrate, which is largely employed as an addition to cow's milk, acts as a protective colloid.

Colloidal protection may be accomplished by the use of *animal proteins* (gelatin, albumin), *vegetable proteins* (gluten) or *carbohydrates* (gum arabic, tragacanth, Irish moss), so that there is wide choice in clinical practice. The dextrinized gruels now used combine the protective colloids gluten and dextrin. Under ordinary conditions of digestion casein is coagulated only in neutral or acid solution; it is quite evident, therefore, that alkalis, such as lime water and bicarbonate of soda, may by their antacid action partially or entirely inhibit the coagulation of casein.

Diet in Pulmonary Tuberculosis.

The feeding of the tuberculous patient is a double-edged sword; it must be handled with the greatest of care, and each thrust at the disease with it should be made with great precision. Diet is the most important element in the treatment of tuberculosis, but it is also a dangerous one, if carried out without a system, Dr. Charles Rayevsky, Liberty, N. Y., observes (*N. Y. Medical Journal*, May 14, 1910), in outlining the indications and hindrances to superalimentation in the scientific treatment of pulmonary tuberculosis.

This disease debilitates every organ in the body, but notably that of digestion, he continues in substance. The result is malnutrition and general wasting. The earliest treatment by forced feeding grew out of the erroneous conception of the disease as one primarily of nutrition.

Over-feeding cannot arrest the disease. On the contrary, it may do much harm. It will over-burden the already debilitated digestive organs. Or, if the digestive organs prove equal to the added strain, the heart may fail to do the increased work, or the kidneys become over-worked.

Diet will, though, always remain the mainstay in the treatment of tuberculosis. By proper diet-

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ing we may not only support the system and replenish the vital forces lost in combat with the disease, but we may also create additional resisting powers, enrich the blood by increasing the powers of assimilation and nutrition.

The scientific feeding has thus far not been a success, though it should have been of great usefulness. The trouble is usually that our scientific dieticians are too much preoccupied with the calculations of the calories, are poor culinary artists, and overlook the palate and the powers of assimilation and nutrition.

The question is not only how many calories to administer, but also from what class of food to obtain them. And not this alone—sometimes the question may arise what food to administer for the purpose, as many of them act as therapeutic agents and may exercise their influence on various symptoms and conditions of the disease.

We must bear in mind also the social condition of the patient. Tuberculosis is a social-economic disease; it is the disease of overcrowding, of the tenement, of unhygienic conditions, of overwork and underfeeding; it is mainly the disease of the working classes and poor people. The diet, therefore, must not be too fancy, not too elaborate, but of plain, simple cooking, and of the most nutritive materials that may be obtained with limited means.

When we consider that the patient is usually taken away from his daily occupation and is put to hospital or comparative rest, that his system does not undergo its ordinary wear and tear, and consequently requires less than the ordinary quota of food, we must come to the conclusion that the amount of food sufficient for a moderately active individual should be more than sufficient for the inactive, resting patient. Then the rule is that these patients, at least in the beginning of treatment, have more or less pyrexia—a condition always restricting the advantageous taking of food.

The sources of the proteids may be from the vegetable as well as from the animal kingdom. But we must remember that the former are not so easily digested and assimilated as the latter, therefore the bulk of the proteids should come from the meat of animals and fish. The carbohydrates are best obtained from cereals.

The fat is obtained from the meats, but the principal source of fat should be butter, cream, and milk. The tuberculous individual has a great tolerance, if not an affinity to fats; he can absorb them in much greater quantities and with greater ease than the healthy individual does. This hint from nature should never be overlooked, and there should be more fat administered to the tuberculous than the healthy individual requires.

Besides these the vegetables and fruit that make up the trimmings at each meal are to be considered.

The proportions and relative values of an adult patient's food allowance may be put thus: Proteids, 3 ounces (100 grammes), or 410 calories; fats, 3 ounces (100 grammes), or 910 calories; carbohydrates, 10 ounces (320 grammes), or 1,412 calories.

This would somewhat increase the food value of the patient, and this is about the overfeeding that should be allowed until the patient has gained his normal weight according to his height and chest measurements. After normal weight has been established the fats should be gradually withdrawn, the carbohydrates again increased until the normal amount of their consumption has been reached again, otherwise we may cause a coat of superfluous fat and aponeurotic tissue that, instead of helping the patient, would overburden him, make him feel flabby and lazy and interfere with his heart's action.

Parasitic Hemoptysis.

An endemic form of hemoptysis, known as Tochil (*to-chil, water disease*), in Korea and parts of Japan, where, in some valleys, as many as one-fourth of the population is infected, is being carried by these victims to Hawaii and the United States. Dr. M. M. Null, Seattle, Wash., who found a typical case in one of his office patients, a Korean, last summer, describes the disease in full and with notable clearness (*Northwest Medicine*, Dec., 1910). Others have observed this disease among Orientals along our Pacific coast, but as far as is now known no case has yet been reported found in native citizens.

Tochil is caused by a flat worm that burrows in the tissues of the lungs, liver, peritoneum, brain or testes, most frequently the former. In these burrows the worm is surrounded by a rusty brown liquid. This liquid, mixed with mucus, constitutes the so-called bloody sputum. Frank hemorrhages result from destruction of walls of blood-vessels. If such an episode does not occur the patient lives on to old age, an invalid, more and more poisoned by the toxins of the parasite. The latter condition is shown by the growing general debility and anemia. The cough may become violent and result in death in a few hours. Jacksonian epilepsy is a feature of the disease when the brain is invaded.

Socially tochil is oriental hookworm disease. In advanced cases the victim is woefully indolent. There is now every reason for fearing that sooner or later this disease will plant itself in the valleys of our Pacific Coast States.

This question is presented to our readers: Does any one know of any drug or preparation which, applied to the post-nasal space, will cause the disappearance of adenoids?

Editor Medical Council:

Like Dr. T. C. Harris, on page 148 of April COUNCIL, I find that diseases of the stomach present many puzzling problems in actual practice. I should like to see this subject thoroughly treated in the COUNCIL in the near future.

F. W. Brinkmann, M.D.

Bay, Mo.

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Function of Appendix.

That the vermiform appendix, in man, is not solely a vestigial structure, but a specialized part of the alimentary canal, is the contention of Dr. E. M. Corner, London, England (*Annals of Surgery,* Oct., 1910). He points out that everywhere in the kingdom of vertebrates the cecal apex is constructed of lymphoid tissue. Wherever found the vermiform appendix, in man or in the lower animal, is constructed of lymphoid tissue. In the lymphoid appendix man has a specialized cecal apex with the function of protecting the body against micro-organisms in the illocecal region.

The comparative absence of lymphoid tissue in the rest of the large intestine is inexplicable, as it is in the cecum that the feces have been brought up to the proper consistence to allow of their passage along the colon, and in consequence there are no more prolonged periods of "rest" in the presence of moisture, the feces becoming dryer and harder; consequently there will be less fermentative action.

Banana Flour as Infant Food.

At the recent convention of the British Medical Association Dr. Eric Pritchard reported his success (*British Medical Journal,* Oct. 15, 1910), with banana flour added to infant food to facilitate the digestion only of cow casein, an old empirical practice recently explained on a purely scientific basis.

As cereal gruels Pritchard has employed barley water, bread jelly, oatmeal jelly, and barley jelly. All these are excellent in their way, but the time and trouble required to prepare them properly deters many a poor mother from using these particular diluents. A decoction of banana gruel can be made in a few minutes by rubbing up a heaped tablespoonful (1 ounce) of banana flour with 20 ounces of water, and then boiling for five minutes. A gruel made in this way has excellent colloidal properties when added to milk in equal quantity; it thickens the milk, and prevents formation of a leathery coagulum of casein, and satisfies the appetite of hungry infants more effectually than simple milk dilutions.

He points out the importance, if cereal gruels are employed for this purpose, that they be not given in excessive quantities before the infant has developed its power of diastatic digestion. Very thin gruels should be employed at first, and their strength progressively increased. Thus they serve the double purpose of promoting the digestion of casein and of developing the infant's power of diastatic digestion. Owing to a pigment which tenaciously adheres to the starch molecules, and cannot be bleached out by ordinary methods, this gruel has a light chocolate color and an unattractive appearance. It has been urged against bananas and banana flour that the contained fiber has an injurious influence on the delicate mucous membrane of the infant's intestine. No support for this contention was found, although preference was invariably given the crude flour, as against that sold under fancy names.

Local Use and Toxicology of Cocain.

Some operators employ one method of injection to the exclusion of others, while some use all methods and select the one best suited to the individual case, says Dr. Arthur E. Hertzler, Kansas City, Mo., (*American Journal of Surgery,* August, 1910).

Infiltration is perhaps the most commonly used in this country. It presupposes an accurate knowledge of the sensitiveness of tissues and demands a greater accuracy of technic. By this method the skin is infiltrated by a 1/5 per cent. to 1/2 per cent. cocain solution to which may be added 5 to 15 drops of adrenalin solution (1-1000) to the ounce of the fluid.

For topical effect, particularly in the nose and eye, a 4 per cent. solution is most frequently used. In the nose, solutions half this strength give very satisfactory anesthesia, particularly when combined with adrenalin, and are preferable since the stronger solution may give rise to alarming symptoms. In the eye stronger solutions, up to 10 per cent., are sometimes employed, and because of the small amount absorbed they are relatively safe, but they are probably unnecessary, since the weaker solution gives perfect anesthesia if properly used.

A medicine dropper may be used to introduce the solution into the eye, and from five to twenty minutes are required to secure complete anesthesia. In the nose the anesthetic may be introduced by means of a spray or a pledget of cotton. The former is the more convenient inasmuch as all regions of the nose can be easily and quickly reached. For intensive action, however, it is best to apply the solution to the point of prospective attack by means of cotton. By this means the drug is allowed to act until the desired degree of anesthesia is obtained, which usually requires from five to twenty minutes.

Toxicology.—Instances are recorded showing that (a) very small quantities may produce the most alarming symptoms and (b) that in spite of every care undesired results may crop out at any time, as for example: Ten drops of a 4 per cent. solution used hypodermatically have produced death. Eight drops of a 2 per cent. solution produced violent symptoms in a girl of 12, and 4 minims of a 3½ per cent. solution produced convulsions followed by mania in a strong man. Wood recommends that a total of three-quarters of a grain be not exceeded and that no more be used locally upon mucous membranes than would be used by hypodermatic injection. If these amounts are not exceeded unpleasant results will rarely arise.

Toxic effects manifest themselves without warning. They begin with pallor or slight cyanosis, often with restlessness, and sometimes with a sense of impending disaster. More rarely sudden

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collapse is the first symptom. These conditions may extend into unconsciousness. Only the amount of drug entering the general circulation is of consequence, and larger amounts may be used if precautions are taken to prevent it entering the circulation. Constrictors placed proximal to the point of injection will prevent its entering the general circulation, and when the incision is made much of the poison escapes.

In some instances fainting from the sight of blood or from the thought of the operation may cause the patient to become pale, which may excite in the mind of the operator the fear of cocain intoxication. A differential diagnosis is not always easy, but in simple syncope the subject's condition rarely assumes any other form than pallor, limpness and loss of consciousness. If cyanosis, dyspnea and sense of fear or great excitement appear, it is safest to assume that intoxication has taken place. In persons who have never had the drug used upon them especial precautions are necessary. If repeatedly operated upon and they are found to bear the drug well larger doses may be risked.

The treatment of cocain poisoning is not a matter of great importance. If caution in prophylaxis is not used treatment will avail little. The patient should, of course, be laid down if not already in the recumbent position, the clothing loosened and the respiratory action freed as much as possible. Strychnine in small doses may be used as an agent little calculated to do harm. Morphine, except for delirium, is of no use. While when employed before the cocain is used it appears to have a certain prophylactic effect, as a curative agent it is without power. For convulsions chloroform may be used. Ether, administered by the drop method, on a mask, has recently been employed and is believed to have a direct antidotal effect.

Prophylactic Use of Tetanus Antitoxin.

A clinical case of tetanus is reported and a strong plea made for the prophylactic use of tetanus antitoxin in certain classes of injuries by Charles Rowan, Chicago (*Journal A. M. A.*, Feb. 12, 1910). The victim was the subject of a street-car accident, in which he sustained a compound fracture of both bones of the left leg. Before he could be moved one end of one of the bones came freely in contact with street dirt, then returned to its normal place.

Four hours after the accident he was placed under treatment in a hospital, the wound being irrigated with a large quantity of salt solution, followed by a weak iodin solution, then hydrogen peroxid. The wound was about two inches long and much lacerated. He was immediately given 1,500 units of antitetanic serum, from a lot subsequently shown by examination to contain 500 units more than was claimed on the label—that is, 2,000 units. This administration was about five hours after the accident.

Forty-eight hours later it was evident that the patient had a severe mixed pyogenic and saphrophytic infection. His pulse ran up to 140, temperature to 103.6 F. He complained of headache and nausea and pain in the leg. The leg at that time was enormously swollen, tense, cool, and brownish in color from the knee down. A dirty thin, foul pus was discnarging from the drainage tube. The patient was anesthetized with nitrous oxid, and an incisi n on each side of the leg was made from knee to ankle down to the deep fascia. No bleeding followed these incisions for several hours. This checked the spread of infection, as shown by the improved local conditions and lowered pulse-rate and temperature.

On the twenty-fifth day after the accident symptoms of tetanus appeared. The next morning he had all the symptoms of a severe tetanus, including a tonic spasm of the muscles of mastication, the neck muscles and of both legs and feet, cyanosis, very free sweating, difficulty in deglutition, rapid pulse and increased temperature. The treatment consisted in free irrigation of the wound with hydrogen peroxid, liberal amount of liquid diet, normal salt solution continuously per rectum, morphin enough to make the patient comparatively comfortable, and antitetanic serum subcutaneously, of which he received 18,000 units in less than four days.

The conclusion is that, while 1,500 units of antitetanic serum will prevent tetanus when used early in cases of wounds not followed by severe infection, it may fail when used only once when there is a mixed infection present which lasts longer than ten days or two weeks. It seems that in these cases, while the tetanus bacilli have been present and active from the beginning, the symptoms of the disease have not been present because the toxins produced have been neutralized by the serum, and that when the protective bodies in the antiserum have been exhausted in combining with the tetanus toxin, the toxin which is formed afterward produces the symptoms of the disease.

It would seem, therefore, that every patient with a wound which may cause tetanus should receive as soon as possible 1,500 units of antitetanic serum for prophylaxis, and that if the wound is infected this dose should be repeated once every week while the infection lasts.

Internal Splint Treatment of Fractures.

The fullest revelations of the great searchlight of modern facilities for diagnosis, foremost in which, in this particular field, is X-ray work, have fully confirmed what many post-mortem findings had led us to suspect, namely, that the results are seldom if ever ideal in the old treatment of fractures by means of extension, counter-extension and external splints. Perfect apposition in the healed bone seems practically impossible. The defect may be trivial enough to be unnoticeable, or at most constitute only a slight deformity. But, on the other hand, there may arise from this defect permanent incapacity or painful sequels. The short leg, the irri-

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tated nerve trunk and the weakened muscles are examples of the latter. Then be it noted that more and more frequently these failures are being made the cause for costly damage suits.

In certain cases the use of internal or direct splints is the practical solution of the problem. Dr. Pearse, Kansas City, Mo., in a supplemental paper on the subject (*Jour. M. S. M. A.*, Jan., 1911), sums up the following as insurmountable to the older method of treatment:

(1) It is impossible to see the bone ends, hence also impossible to secure accurate apposition. (2) Breaks are never so exactly transverse as not to slip sidewise on occasions. (3) Portions of fascia and muscle will become misplaced and engage between the ends of the bone. (4) The hemorrhage from broken bones does not stop until the parts are packed with a blood clot that must be absorbed and whose presence increases the stiffness and uselessness of the mended member. (5) External splints applied over the parts, separated from the actual broken bone by muscle, fat and skin, cannot hold the parts in more than indifferent position, and then only by exerting undue pressure on the soft parts. (6) Too often one fragment of the broken bone is too short to afford proper bearing for the splint and thus maintain the axis of the bone in its proper position. (7) Every factor of the external splint process used to maintain apposition, splints, bandages, pressure, extension and rest; all these tell against nutrition. (8) Early motion which is the panacea for stiffness and loss of function must be sacrificed to the need for bony apposition.

In simple fracture the splint is left permanently in place, if possible. If it begins to loosen, as it does sometimes months and even years after it is put in, it is best to cut down and remove it. In compound fractures the aim is simply to retain the splint long enough to secure solid bone union, usually from eight to twenty weeks. The new treatment is quite applicable to all classes of fractures, but Dr. Pearse finds it needful only in about one in four cases. He reports twenty-three cases, selected, as follows:

(1) In simple fractures where external splinting, plaster-of-Paris or extension fails to retain the broken bones in fairly good apposition. (2) In simple fractures very near a joint or involving a joint. (3) In compound fractures where on account of the location of the external wound or of damage to soft parts proper immobilization cannot be done. (4) In ununited fractures formerly done with silver wire.

The following salient points in the technic are endorsed by all surgeons employing this treatment:

"Choose a situation for your incision which involves a minimum chance of damage to important structures and a maximum advantage from the point of view of accessibility. Do not hesitate to make the incision of a length sufficient to enable you to deal effectually with the fragments.

"There is no greater mistake than to exaggerate the difficulties of the operations by employing an incision which is not sufficiently long to permit of easy access to and ready manipulation of the fragments. Its length in no way increases the risk the patient runs, but usually adds to his safety, since it enables the surgeon to deal with the fragments more readily.

"The bone is seized by strong forceps, and the fragments are closely fitted together under the eye of the surgeon; every portion of the break is made to fit accurately. No further oozing occurs from broken bone ends. Blood clots in the soft parts are carefully wiped away. Any fragment of periosteum or fascia that may have been displaced is placed in its proper relation.

"From the supply at hand, taken clean and boiled from the sterilizer, the surgeon selects one splice or internal splint that fits the parts and secures it firmly. More than one can be used if desired. These splints are from fine, malleable steel strips, ground out, shaped, smoothed and polished by a machinist and screw holes made at convenient distances. They may be made of silver or other material if desired, but steel answers all purposes."

Copperhead Snake Bite.

In large sections of our country the sole venomous serpent is the copperhead. Unlike the rattlesnake, the copperhead is often found close to the dwellings of man, may be quite plentiful, owing to its earth color is not quickly seen by a person approaching it, it makes no effort to flee from danger, nor does it warn a person approaching of danger. The wonder is that more persons are not bitten. Bites may appear at any time. The treatment, observes Dr. Prentis Willson (*Journal A. M. A.*, August 17, 1910), is quite simple, but important, for all that.

The copperhead's venom produces a very marked fall in the blood pressure and a selective depressant effect upon the respiratory center. The former is best treated with intravenous injections of adrenalin, if the condition promises to be at all serious. Strychnine is probably as likely to be useful as any other stimulant, especially in those cases where there is a tendency toward respiratory depression. Caffeine and camphorated oil would seem to be indicated on theoretical grounds, in bad cases, as in young children.

The recumbent posture with the head low and external heat should be used. Bandaging the extremities, abdominal compression by a tight binder, and artificial respiration may be tried in very serious cases, but such cases will be very rare except in young children. Locally the ideal treatment consists in the application of a series of ligatures between the wound and the heart, tied tightly enough to impede the return flow of blood and lymph but not to cut off the circulation and obliterate the pulse.

The best interest of the patients will be best

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conserved by no interference with the wound beyond the application of an antiseptic occlusive dressing. In cases in which a young child has been bitten by a large snake and comes under treatment at once, dissection of the wound and the use of crystals of potassium permanganate under every aseptic precaution would be indicated.

BOOK REVIEWS

A Text-Book of Medical Diagnosis. By James M. Anders, M.D., Professor of the Theory and Practice of Medicine and of Clinical Medicine, and L. Napoleon Boston, M.D., Adjunct Professor of Medicine, Medico-Chirurgical College, Philadelphia. Octavo of 1,195 pages, with 443 illustrations, 17 in colors. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, $6.00 net; half morocco, $7.50 net.

Our readers are already well acquainted with Dr. Boston through his masterly work entitled "Clinical Diagnosis," which we reviewed some years ago and especially recommended that each reader should place in his library, and also through his excellent articles upon "The Blood in Diagnosis," which he has contributed to the columns of THE MEDICAL COUNCIL. Dr. Anders is well known by his work upon practice.

If this was merely another work upon diagnosis in the same style and on the same plan as others, there would be no reason for giving it space in these columns. However, it is different and the difference is such as to make it a necessary book for the general practicing physician. The introduction gives "General and Special Considerations," "Investigation of Individual Cases," "Physical Examination and Bedside Observations." Then commences an examination of the different systems and regions of the body, thoroughly analyzing them and considering the diagnosis in each case. In each disease there is one topic which we never saw treated in any other work on diagnosis, namely "Principle Complaint." This is the guiding note to the examining physician, indicating the principle symptoms which cause the patient to seek a physician. In examining and testing the work we find this to be an exceedingly valuable aid in the analysis of a given case.

In addition to the usual modes of diagnosis there is given in most of the diseases one or more illustrative cases, selected from those actually observed in the practice of the authors, with an analysis of the symptoms as laid down in the principles previously established. We predict that this book will establish a new advance line for works on diagnosis.

High Frequency Manual. Nobel M. Eberhart, A.M., M.S., M.D., Professor of Electrotherapy, Chicago College of Medicine and Surgery. Cloth, 303 pages. Illustrated. Price, $2.00. New Medicine Publishing Co., Chicago Savings Bank.

The subject of electric diagnosis and treatment is advancing so rapidly that it is difficult for the general practician to keep pace with it. For those who are using the high frequency currents there has been a need of a suitable manual. The physician will find this one quite satisfactory as far as the subject has been developed.

A Compend of the Active Principles. Harold Hamilton Redfield, A.B., M.D. 115 pages. Cloth. Price $1.00. Clinic Publishing Co., Chicago, Ill.

In the consideration of the active principles it has been realized by discriminating physicians that the physiologic action and consequently the therapeutics of a given active principle are often different from those of the crude drug, inasmuch as one active principle often does not represent the crude drug. Hence each active principle should be worked out by itself and thus may any particular indications be brought out. This little manual deals with the active principles of a considerable number of drugs and with some concentrations which are not active principles. We think it a very useful work for those who are using the granules in their practice.

A Manual of Cystoscopy. J. Bentley Squier, M.D., and Henry G. Bugbee, M.D. Flexible leather. 117 pages. Price, $3.00. Paul B. Hoeber, 69 E. Fifty-ninth street, New York, N. Y.

This work consists of a brief text with 26 original plates, 18 of which are colored. The introduction of the electric method of illumination makes examination of the inner surface of the bladder possible. The treatment given in this work will be a great aid to the physician in making bladder examinations and diagnosis. The reason for the high price of such a small book is fully explained by an examination of the colored plates, which are very expensive to produce.

Diseases of the Stomach and Intestines. Boardman Reed, M.D. Illustrated. 1,037 pages. Price $5.00. E. B. Treat Co., 241-243 West Twenty-third street, N. Y.

This is the third edition of a most excellent book, thoroughly revised and largely rewritten, which we took pleasure in reviewing in previous issues. Dr. Reed is very painstaking and careful in the matter of examination in order to reach diagnosis. Those of us who knew him when in practice here in Philadelphia are prepared to appreciate the thoroughness of

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his work. We commend especial attention to the chapter upon prophylaxis and personal hygiene. The author goes very thoroughly into the subject of treatment of diseases of the stomach and intestines. An original and unique feature of this book is the department called "Gastro-Intestinal Clinic." We most heartily commend this work to the careful study of the general practicing physician.

Henley's Twentieth Century Book of Recipes, Formulas and Processes. Edited by Gardiner D. Hiscox, M.E. Cloth. 787 pages. Illustrated. Price, $3.00. Physicians' Drug News Co., 250 High street, Newark, N. J.

This is a most excellent collection of recipes and bits of information containing nearly 10,000 selected, scientific, chemical, technical and household recipes, formulas and processes for use in the laboratory, office, the workshop and in the home. You will find this useful in everyday life. Bear in mind that it is not a work dealing with medical topics.

The Secrets of Specialists. A. Dale Covey, M.D. Cloth. 381 pages. Illustrated. Price, $3.00. Physicians' Drug News Co., 250 High street, Newark, N. J.

This work has been before the profession for several years. The methods of the advertising specialists are given and, in addition to them, a great many excellent methods of treatment which have either been verified through advertising specialists or through some of the various secret formulas. The physician will be sure to find information in it quite sufficient to justify purchasing it, as it is important that he should know what is going on around him in the practices of those who are bidding for practice in an irregular way.

The Experimental Chemotherapy of the Spirilloses. (Syphilis, Relapsing Fever, Spirillosis of Fowls, Framboesis). Paul Ehrlich and S. Hata, with contributions by H. J. Nichols, New York; J. Iverson, St. Petersburg; Bitter, Cairo; and Dreyer, Cairo. Translated by A. Newbold, and revised by Robert W. Felkin, M.D., F.R.S.E., etc. 34 tables in the text, and 5 plates. Cloth. 181 pages. Price $4.00. Rebman Co., 1123 Broadway, N. Y.

This work contains the details of a long series of experiments in Chemotherapy on the various diseases caused by the organisms known as the Spirillæ, namely, Relapsing Fever, Syphilis and the Sleeping Sickness. It deals with such chemical agents as Salvarsan, Atoxyl, Arsacetin and others.

Salvarsan or 606. W. Harrison Martindale, Ph.D. (Marburg), F.C.S., and W. Wynn Westcott, M.B. (London), D.P.H. Cloth. 77 pages Price, $1.50. Paul B. Hoeber, 69 East Fifty-ninth street, New York, N. Y.

This is a brief discussion of the method of administration and results, both favorable and unfavorable, in the use of Salvarsan, "606," in the treatment of syphilis.

Plaster of Paris and How to Use It. By Martin W. Ware, M.D., N. Y., Adjunct Attending Surgeon, Mount Sinai Hospital; Surgeon to the Good Samaritan Dispensary; Instructor of Surgery in the New York Post Graduate School. Second edition revised and enlarged. Price, cloth, square form, $1.25. De Luxe leather, $2.50. Surgery Publishing Co., New York.

This helpful book has been completely rewritten and enlarged and thus its scope of usefulness has been greatly extended. Complete new drawings and marginal side notes in red embellish the book and ninety illustrations are used to more clearly put up to the eye of the reader the intent of its subject-matter.

Such information as history, materials, manufacture of bandages, storage, bandages of commerce, calot plaster bandages, the immediate preparation of bandages, application and precaution, removal of bandages, etc., are all given under the contents of the Plaster of Paris Bandages. Then follow such chapters as Application of the Plaster of Paris Bandage to Individual Fracture, Fractures of the Upper Extremity, Fractures of the Lower Extremity, Moulded Plaster of Paris Splints, Plaster of Paris in Orthopedic Surgery, etc., and all presented in such a comprehensive manner as to make this book of particular service to every doctor. The mechanical features of the book are decidedly striking.

American Proctologic Society.

The following is a list of the addresses and papers to be presented at the thirteenth annual meeting, Hotel Alexandria, Los Angeles, Cal., June 26 and 27, 1911:

Annual address of the president—Subject: Proctologic Recommendations, George J. Cook, Indianapolis, Ind.

Papers.

1. A Review of Proctologic Literature for 1910.—Samuel T. Earle, Baltimore, Md.
2. How Can Diverticulæ of the Sigmoid Produce Abscess in the Retro-peritoneal Space?—A. Teirlinck, Gand, Belgium.
3. Some Observations Upon Surgical Anatomy and Mechanism of the Colon—Granville S. Hanes, Louisville, Ky.
4. Treatment of Rectal Diseases by Ambulant Methods.—Wm. L. Dickinson, Saginaw, Mich.
5. Have We An Ideal Operation for Internal Hemorrhoids?—A. B. Cooke, Nashville, Tenn.
6. The Clamp and Cautery Operation for Hemorrhoids.—Chas. S. Gilman, Boston, Mass.

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7. Symposium on Constipation:
(a) Etiology.—Horace Heath, Denver, Col.
(b) Physiology.—S. T. Earle, Baltimore, Md.
(c) Bacteriology and Urinary Findings—John L. Jelks, Memphis, Tenn.
(d) Pathology and Diagnosis.—Wm. M. Beach, Pittsburgh, Pa.
(e) Sequelæ Including Autointoxication.—A. J. Zobel, San Francisco, Cal.
(f) Psycotherapy, Mechanical, Electrical Treatment, and Massage.—Jas. A. MacMillan, Detroit, Mich.
(g) Non-surgical Treatment.—Dwight H. Murray, Syracuse, N. Y.
(h) Surgical Treatment.—Louis J. Hirschman, Detroit, Mich.
8. Universal Abuse of Purgatives in the Treatment of Constipation.—Leon Straus, St. Louis, Mo.
9. Cancer of the Rectum.—J. R. Pennington, Chicago, Ill.
10. Pigmentation of the Rectum and Sigmoid, with Report of a Case.—Jerome M. Lynch, New York City, N. Y.
11. Observations Upon Relationship of Tuberculosis to Peri-rectal Suppurations.—Collier F. Martin, Philadelphia, Pa.
12. Reflex Disturbances Referable to the Rectum.—T. Chittenden Hill, Boston, Mass.
13. (a) Malformation of Rectum and Anus, with Report of a Case.
(b) Pruritus Ani, with Report of a Case.—Donly C. Hawley, Burlington, Vt.
14. Radiograph in Entero-Proctology.—F. C. Yeomans, New York City, N. Y.
15. Some Practical Considerations of the Etiology of Diarrhoea and its Treatment.—Alois B. Graham, Indianapolis, Ind.
16. Fads and Fallacies of a Valvotomist.—Thomas Charles Martin, Washington, D. C.
17. Syphilitic Affections of the Rectum and Anus.—Lewis H. Adler, Jr., Philadelphia, Pa.

Officers.

President, George J. Cook, M. D., Indianapolis, Ind.
Vice-President, Jerome M. Lynch, M.D., New York City, N. Y.
Secretary-Treasurer, Lewis H. Adler, Jr., M.D., Philadelphia, Pa.

Treatment of Rhus Poisoning.

I would call the attention of the profession to the one remedy, in my opinion (used in conjunction with some minor ones), and that is the good old-fashioned lead and opium wash, improved. The improvement is a solution of boracic acid 10 grs. to the ounce of distilled water as a base, grs. 5, acetate of lead, and in place of powdered opium, the U. S. P. liquor morphine sulphatis. This improvement does away with the unpleasant odor and staining properties of the ordinary lead and opium wash.

The directions are as follows: After the initial cleansing of the affected parts with a 1-40 solution of carbolic acid and any good laundry soap, water is not again to be used during the treatment. If for any reason the affected parts have to be cleansed, carbolized oil is to be used, applied on absorbent cotton. Apply the improved lead and morphine lotion on antiseptic gauze and on parts not convenient to bandage apply the lotion and dust with camphorated sterate of zinc. This dusting powder is not only soothing, but helps to control the oozing, thereby preventing the spreading of the rash. At bedtime advise patient to wear loose cotton gloves, if for any reason the hands cannot be bandaged. This last measure will often prevent the spreading of the rash to the eyes and genital organs.

Internally I use small doses of aconite and gelsemium, for the fever and nervous disturbance, and calomel, ipecac, and bicarbonate of sodium, following the latter with sulphate of magnesia in water before breakfast.

In conclusion I will say that in a practice of over twenty-five years in a part of the United States where poison ivy rash is very common I have met with few cases that the treatment as outlined has not speedily and almost painlessly cured; and this, too, after most of my patients have used the ordinary home remedies, such as salt water, white lead, spirit of nitre, aqua ammoniæ, etc. In my opinion the failures that have been charged to acetate of lead have been due to the fact that the solutions have been applied entirely too strong, thereby causing a great deal of pain and an increase of the inflammation of the skin.—C. H. Gardner, Ph.G., M.D., Spruce Creek, Pa., in *Medical Record.*

Sterling Debenture Again.

The progressive magazines are doing a great work in exposing high finance and fake business operations, as well as in showing up political corruption. We commend that brave publication, *Collier's,* for its excellent work. For example, in the edition of April 29 we find the following important article:

Warning.

The Sterling Debenture Corporation is the most flamboyant promoter since the Burr Brothers were chased out of business by the United States Government. We warn such of the investing public as are still hesitating before sending in a check for their stock offerings by mail order—Telepost, Oxford Linen Mills, and the like—to retard the motion and save the money. A few months ago the Sterling Debenture had almost as many typewriting girls in its New York office to write come-on letters to its sucker lists as it had operatives in its linen factory in Massachusetts. In the flush days of stock sales it had 103 typewriters in the Brunswick Building, New York, and it had 125 factory operatives at North Brookfield. With that company—the Oxford Linen Mills—the Sterling people have been manufacturing linen out of *imported* fiber, *imported* linen waste, *imported* linen yarn. But they have based their claims of immense profits for stockholders on their ability by secret process to make linen goods out of raw American flax. They refer to their Telepost as a "commercial success," when the business of its ebb-tide offices is too small to pay the office bills. When their hands clutch an honest, well-meant product and company, such as the American Telegraphone, they milk the company so hard that its annual report showed a total of only $148,000, while the Sterling Debenture was openly boasting of having sold a million dollars' worth of stock. Rarely has the world known "fiscal agents" or stock sellers who intercept more than $850,000

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on a million subscribed, and then continue in business for several years with fresh stock offerings. Judge Gerard, in weighing the comparative merits of the Sterling Debenture Corporation with the Standard Debenture Company, whose presiding genius is the ex-convict and proved crook, Edwin Noblett, called one company the pot and the other the kettle. Shumaker and Middlebrook, the astute and tricky manipulators of the Sterling Debenture, have left a trail of wreckage since they emerged as pet pupils from Beloit. Frank Doubleday was able to collect $12,500 from them in court, as the results of their sojourn in his publishing house. But the stockholders in their schemes will not be able to collect real money from them, because much has been expended in lavish literature and in office rent.

How to Destroy Fleas.

In "Notes on Agents Used for Flea Destruction," Mitzman, in *Public Health Reports*, July 29, 1910, gives some excellent information on the subject of flea destruction, and concludes with the following summary:

Water, glycerine, alcohol, formalin, phenol, mercuric chloride and trikresol in the strengths used as disinfectants are of little value in killing fleas.

Sulphur as a powder also proved of no value.

Kerosene and miscible oil are extremely efficient as flea destroyers.

The fumigants—bisulphide of carbon and sulphur dioxide (obtained by burning sulphur)—are highly efficient in strengths employed for flea destruction.

How to Kill Flies.

To clear rooms of flies carbolic acid may be used, as follows: Heat a shovel or any similar article and drop thereon twenty drops of carbolic acid. The vapor kills the flies.

A cheap and perfectly reliable fly poison, one which is not dangerous to human life, is bichromate of potash in solution. Dissolve one dram, which can be bought at any drug store, in two ounces of water, and add a little sugar. Put some of this solution in shallow dishes and distribute them about the house.

Sticky fly-paper, traps, and liquid poisons are among the things to use in killing flies, but the latest, cheapest and best is a solution of formalin or formaldehyde in water. A spoonful of this liquid put into a quarter of a pint of water and exposed in the room, will be enough to kill all the flies.

To quickly clear the room where there are many flies, burn pyrethrum powder in the room. This stupefies the flies, when they may be swept up and burned.

Calcium in the Treatment of Eclampsia.

A new light has been recently thrown on the heretofore obscure etiology of eclampsia, and has suggested the use of calcium salts as a therapeutic means of relieving the dangers of this distressing possibility in the pregnant.

Chirara and Januschke, in ththeir experiments on animals, found that when calcium salts were administered the animals did not give rise to inflammatory exudates under the influence of chemical and bacterial irritants. Meyer, of Vienna, believes that he has demonstrated that they diminish the permeability of the walls of the blood vessels. J. R. Mitchell (*Med. Record*, November 19, 1910), advanced the theory that eclampsia, like tetany, was due to calcium absorption by the fetal parasite, and that this element gave rise in the mother to dental caries, headaches and nervous symptoms, which can be relieved by the administration of calcium salts. Of these, the so-called lacto-phosphate of calcium is a nice preparation, when made according to the formula of Dusart (Dusart's Syrup). A tablespoonful of this syrup is equivalent to 20 centigrams of bi-calcium phosphate, and this quantity may be administered in impending eclampsia, as indicated by delayed coagulation of the blood, the urinary findings, and the associated edema.

Scientific Market Gardening.

Wilbur D. Nesbit, the poet, playwright, and eminent after-dinner speaker, has taken up market gardening as a side line.

The following are some bits of his advice given to his brother amateurs:

"In planting canned tomatoes, take the cans from the box carefully and place them in a trench deep enough for them to be warmly covered when the dirt is piled in. Some gardeners split the lid with a can opener before planting, but this need only be done in a backward season.

"Plant your egg plants in beds of straw when the nesting season begins. We do not agree with some authorities who claim that turkey egg plants thrive best is roosted on high branches.

"Examine your seed potatoes for symptoms of strabismus. Do not plant them until this complaint is corrected, as otherwise they can not see which way to grow.

"Now is the time to set out the bulbs of the electric light plant. They should be set in rows, with alternating currants.

"Pie plants should be grown in window boxes, and the vines so trained that the fruit of the custard and other open-faced varieties will not drop on the window seats.

"Crab apple bushes should not be started in lobster pots."

Preserving Wooden Posts.

A writer in a building magazine says: "I discovered many years ago that wood could be made to last longer than iron in the ground, but thought the process so simple that it was not well to make a stir about it. I would as soon have poplar, basswood or ash as any other kind of timber for fence posts. I have taken out basswood posts after they have been set for seven years, and found them as sound when taken out as when first put in the ground. Time and weather seemed to have no effect on them. The posts can be prepared for a cent or two each. This is the recipe: 'Take boiled linseed oil and stir in pulverized coal to the consistency of paint.'"

Lorimer, of the Senate, is still in the lime-light. We doctors might suggest that, for the whole mess of supporters of bribery and corruption, the chloride-of-lime-light wouldn't be bad.

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THE

Medical Council

A MONTHLY JOURNAL FOR THE PHYSICIAN AND SURGEON.

"WE FIND WISDOM AND STRENGTH IN COUNCIL."

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Infantile Paralysis.

In 1910 there were reported in Pennsylvania 1,097 cases of acute anterior poliomyelitis with 172 deaths. July, August and September were the heavy months, aggregating 805 cases with 122 deaths.

The experiments of Landsteiner and Popper, of Vienna, and Flexner, of New York, have conclusively shown infantile paralysis to be an infectious disease, due to an ultramicroscopic organism, and that inoculation may take place through the respiratory and digestive systems, as well as in other ways. This indicates the necessity for isolation.

The period of incubation varies between 2 and 30 days; average 7 to 10 days (reports New York Board of Health and Massachusetts Board of Health, 1910). Duration of infective period is unknown. Osgood & Lucas (*Journal A. M. A.*, February 18, 1911) show virus persisting in nose and throat of monkeys several months after acute symptoms disappeared.

This disease has a mortality of 5 to 20 per cent., and 75 per cent. of surviving patients are permanently crippled (Conclus. of Am. Orth. Soc. and Am. Ped. Soc., Washington, D. C., May 5, 1910). This emphasizes the importance of reporting cases, isolation, disinfection and prophylactic precautions.

Diagnosis.

Occurs in summer and fall; epidemic; sudden onset, restlessness, drowsiness, fever, profuse clammy sweating; frequently sore throat and digestive disturbances. Following these are symptoms of general infection—vomiting, chill, convulsions (general or localized, lasting a few minutes to several hours); retraction of head; headache; may be rigidity of neck muscles. Tenderness of spine, body or limbs is a suspicious early sign. Temperature ranges from 99.5 to 104; pulse 120 to 140.

In the severe form the child is listless; face flushed; dark circles around eyes. It lies in an apathetic state, frequently crying out with pain. Passive motion causes the same cry of pain. Sleep constantly disturbed. Anorexia and great thirst. Various rashes have been described; none characteristic. Anuria frequently present for a short time.

Throat shows redness over tonsils and nasopharynx; not characteristic. Hyperesthesia; abdomen may be retracted; patellar reflexes unequal, may be slightly exaggerated and later diminished.

The blood shows leucopenia with relative increase of lymphocytes. The spinal fluid shows lymphocytes; otherwise negative.

The duration of this stage is from a few hours to three or four days, ending either in recovery without paralysis, which constitutes the abortive type, in paralysis, or in death.

The paralysis is sudden, occurring any time after first few hours of onset. The leg, which is most frequently affected, falls limp, has a lower temperature than its fellow, bluish discoloration, and feels clammy. Reflexes unequal or abolished in affected part. A partial Kernig's may be present. Usually no abnormality in sensation. If the affection is bulbar, paralysis may be a squint, ptosis, etc. This is rare.

After constitutional symptoms subside paralysis remains stationary for some weeks

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and reactions of degeneration appear. Usually atrophy of muscles affected. Convalescence begins by spontaneous improvement in paralyzed part, noted first in last group of muscles affected. Permanent paralysis results in deformities. In the leg the anterior tibial and peroneal group, and in the arm the deltoid are most frequently permanently impaired. Talipes valgus and varus associated with equinus, subluxations, shortening, fractures and disproportions of members are the final earmarks to be feared.

Treatment.

Quarantine and isolation are imperative. Patient kept in recumbent posture and absolutely quiet; mild cathartics and sedatives or analgesics; bromide and codein are considered preferable to the sedative drugs, which may be too depressing; febrile diet; mild counter irritation or cupping of the spine may give relief. Care should be taken not to blister.

Room should be bright and well ventilated and patient kept in open air as much as possible, weather permitting. Elimination is important. Bowels should be watched daily, plenty of water by mouth and warm baths for skin elimination. Since circulation of affected limb is defective it should be loosely wrapped in woolen bandages and artificial heat applied. No drug has been found of special value. Urotropin has been advised, since after its administration formaldehyde has been found in the cerebrospinal fluid. It can do no harm and may assist in combating general infection. All other treatment of this stage is symptomatic.

After the fever has subsided, treatment resolves itself into limiting as much as possible the final paralysis, the preservation of function, the protection of the nutrition of the affected muscles and the prevention of deformities. Lovett & Lucas state that deformities are largely unnecessary, for by careful study of the case they may be anticipated and preventive measures instituted.

General health of patient is of utmost importance. Fresh air, good food and proper hygiene. In about two weeks after subsidence of fever massage may be begun, very light at first and gradually increased to maintain a good blood supply and give disabled muscles exercise. The affected limb should be placed in such positions as will counteract development of contractions, and changed frequently. Remarkable results have been attained in apparently hopelessly paralyzed limbs by faithful and persistent massage and "muscle education." Patients should be directed to attempt voluntary movements, and if necessary assisted or even carried out by attendant. Each group should be treated in this way. Where a muscle or a group of muscles is completely paralyzed, often others may be trained to fulfill their functions. Exercise in the open air is also important. In some cases it will be found necessary to adjust some form of brace to prevent contractures, to be worn *especially* when the patient is *asleep* or at *rest*. This brace should be as light and simple as possible.

Too much stress cannot be laid on massage, as it is through this means that most of our cases are benefited.

In old or neglected cases the orthopedic brace, tendon transplantation, tenotomies, arthrodesis and other operative measures may be necessary.

Flexner has produced an immunity with serum obtained from cured cases (monkeys), and in some instances has markedly influenced the course and extent of the pathological process by the injection of this serum. How long this immunity will last and whether it is applicable to the human species is open to question. We are still handicapped by the fact that few cases can be diagnosed before paralysis has developed. It would be of especial use in epidemics where we are on guard, so to speak.

The Tetanus Problem.

Of all diseases occurring with about the same frequency, none presents a greater problem than tetanus. Indeed, the tetanus problem—medical and social, and patriotic or, better, *non-patriotic*—is important in proportion to and because of the very infrequency of the disease. It is a curious fact that if the average practician saw more cases the *general* knowledge of the disease, and especially of the efficacy of our preventive—also the supreme importance of placing our sole reliance as far as possible on the preventive measure, would be far greater.

Generally speaking, the dread of lockjaw is universal, but, being largely based on ignorance, yields no especially salutory effects—not enough to assure for the human the

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beneficent service the veterinarian is enabled to give to horses, of all animals the greatest sufferer from tetanus.

Were it not for the systematic recurrence of what may be designated our *annual patriotic epidemic of tetanus* we would not write on this subject. As it is, a brief summary of the nature of this disease, the character of the wound that is so apt to usher in tetanus and how to control the disease, is seasonable.

Tetanus is pre-eminently a disease of the conflagration type—kindled by the merest spark, suddenly bursting forth and apt when first discovered to be already most formidable. The specific toxin is so virulent that one-millionth of a grain, a quantity inconceivably small, has been known to kill a guinea pig. This toxin expends itself on the central nervous system. When symptoms first appear the clinical evidence is conclusive that the system is already profoundly impressed. In particularly virulent infections a very profound impression may be made within a few days after the infection of the wound, and an equal time before the case comes to the attention of the family doctor.

Here, then, is a clinical fact that has prognostic value while it bristles with sanest precautionary features. Despite the fact that quite generally it is the vigorous, robust worker or sportsman who falls victim to tetanus, the mortality is simply frightful, from 80 to 98 per cent. The small percentage of discoveries is found among those who showed a *long* period of incubation from 8 to 24 days, or that ran an irregular course, or the so-called chronic cases—and cases that are treated with heroic doses of antitoxin and enough of them. But the redeeming feature is found in the superb fact that 100 per cent. of cases that receive an immunizing dose *early* (1,500 units) are certainly protected. In a virulent infection there is always the possibility that the preventive dose that is given a few days after the wound was received has come too late to afford more than a mere modifying effect.

In the prevention and cure of tetanus the keynote must ever be *despatch*. To this must be added, if the earliest symptoms appear, the heroic use of antitoxin with utter disregard to the matter of cost. The fact is that the combination of qualities that make for a successful issue in the average case of lockjaw—experience, a thorough knowledge of the constitution of the patient, the power of the remedy and the financial status of the father, moral courage to go ahead though the heavens fall—is rare in general practicians. Experience places the minimum dose of serum at 15,000 units and the maximum at 30,000 units. The number of doses requisite to effect a cure ranges as high as twenty-five, though the average perhaps does not exceed eight or ten. The serum seems harmless. One successful case received a grand total of 198,000 units, which cost a considerable sum if paid for at the list price of tetanus antitoxin, which is unavoidably expensive, namely, $5.00 for 3,000 to 5,000 units.

Finally, the character of the wound and the environment of the accident assume here a clinical significance as nowhere else. Generally, it is the closed wound that breeds tetanus. Cultures of the specific germ can be made free or practically free from oxygen. It is a native of garden soil, perhaps an essential of all fertile soils—maybe one of the germs concerned in vegetable growth —hence the prevalence of the tetanus germ in dust, in earth, in saltpetre, in manure, in gunpowder, on rusty nails, etc.

A few of these may be made illustrative of how the implantation of tetanus is brought about and what kind of wounds should be invariably classed as *suspicious*. As a cause of tetanus, the blank cartridge ranks first and merits only contempt and universal federal prohibition. In seven years, 794 persons, mostly "the flower of our youths," died from this one avoidable cause! Through saltpetre the germ finds its way into common gun powder. In the case of the ill-famed *rusty nail*, the rust merely served to carry the germ deep into a punctured wound.

The prompt employment of a preventive dose of serum in all suspicious wounds should be made obligatory where this has not already been done. Where the authorities have not yet taken up this matter it is especially the duty of the practician to take the initiative in urging its importance upon all concerned. The cost is not prohibitive while results abundantly justify the practice.

All powder wounds, street, field, stable, wire fence, rusty nail and kindred wounds are probably classed as suspicious.

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Public Sanitation as a Medical Specialty.

A correspondent in the May Council asks for information as to the facilities for special training in this work, the field for effective work, the demand for trained men and the rewards for service.

In England, ever since 1892, no one can be appointed a medical officer of health unless he can legally qualify as a graduate in medicine from an institution giving special instruction in state medicine. England has a trained body of effective health officers. Until 1908 there were no adequate courses given in the United States paralleling those of the English universities. In that year Cornell offered special courses and the example has been followed by several of our stronger institutions and the number of courses is rapidly increasing until, to-day, nearly all of our better university medical schools give training in state medicine.

We fear that the average doctor has a rather hazy conception of what a medical health officer should know, hence we outline the Cornell course as follows: Public health administration, town planning, industrial hygiene, rural sanitation, heredity, public health legislation, vital statistics, prophylaxis, insanity and public health, voluntary organization in health work, bacteriology and laboratory methods, epidemiology, disinfection, the cancer problem, food adulterations and their detection, dairy processes, dairy hygiene, school hygiene and inspection, tuberculosis control, industrial waste and sanitation, the many aspects of quarantine, alcohol and public health, insect transmission of disease, infectious diseases of animals, tropical medicine, the negro problem and sanitation, therapeutics and public health, the sanitary regulation of public carriers, immunity, nuisances and public health, sanitary construction, water and sewage filtration, water and sewage purification, sewage disposal, limnology, occupational diseases, modern housing, plumbing, heating and ventilation, economics and sociology as relates to state medicine, general municipal sanitation and the innumerable side questions arising from the study of these several subjects.

From this outline one can see that state medicine is only partially a medical specialty. The engineering work, the legal side of the question, the social and industrial aspects of sanitation, the relationship to public charities and institutions, effective administration and the police enforcement of law, as well as many local problems, such as quarantine on the border, the presence of harbors and the influence of race and climate; all these factors are necessary of study and detailed work in order to elaborate an efficient public health work. In some places the engineer is doing quite as important a work as is the physician, and, while the health officer should understand the general principles of sanitary engineering, the practical application of sanitary installation is left largely to the especially trained engineer. A good attorney, a skilled chemist, a bacteriologist and a careful clerk and accountant are also quite essential to make effective the work of the medical health officer. This latter official should be a publicist in its wider meaning as well as a specially trained physician.

The practical outcome of all this is that the physician untrained in public health work is rarely a success as a health officer. It is unwise for the average doctor to undertake public health administration, as he will be not only ineffective, but unhappy as well. No one, physician or layman, should undertake such responsibilities unless he possesses actual or latent administrative ability, an absolutely imperative quality in the successful health officer. There are too many skilled laboratory workers charged with the *general* work of public health administration and doing the latter very poorly; there are too many retired or unsuccessful physicians undertaking this work after their

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habits of thought and methods have become inflexible, and there are vastly too many lay health officers charged with a work so largely medical that none but an up-to-date physician of experience is capable of conducting it with success.

Viewing state sanitation as a medical specialty, we fear that the colleges are ahead of public opinion. It is true that public opinion can be trained so as to demand skilled health service and administration, but it is equally true that there is very little financial outlook for a body of trained men as yet. Taxes are continually increasing and the electors and elected officers are very slow in taking on expensive new departments to be supported by taxation.

And politics enters very largely into the question and the appointments. We have been personally disappointed recently in seeing two of the most scientific and capable health officers in the country displaced by disgraceful political means, and their places are now filled by men probably meaning well but having almost the entire subject of state medicine and public hygiene to learn in "the school of hard knocks."

There is no occasion to wax hysterical over politics. The politician is just about what we choose to make him, and the many commissioners of health and the health officers under them are not so frequently crooked politicians as many physicians imagine them to be. Many men at the head of health departments would summarily discharge the incompetents under them were they allowed to do so. And they would be more than glad to employ only college-trained men with some practical experience if "the powers that be," who control appropriations and are seeking places for their friends, would cease to exert political pressure upon them. Probably politics will some day, like the wicked, "cease to trouble" the health officer, but that day is not yet. Nor is it apt to come until state and municipal civil service arrives. That day is coming, and the public will demand it some time. The question for the medical aspirant to public health responsibilities is: Will it come in time to be effective for *him?*

The field for effective work promises, in time, to be very great. At present the college-bred sanitarian has not had time to demonstrate what he can do. Nor is it to be supposed that the present incumbents, many of whom are very capable, will resign in favor of newer men and newer methods. Probably the most satisfactory field to the man of scientific tastes is in the Public Health and Marine-Hospital Service. If a federal bureau or department of health be established, many openings for capable men will probably be created. Only young and healthy men of high scientific standard will be in demand. Some of the state boards are in advance of the others and openings exist in their work from time to time. An effort toward a civil service is being made in state work and will bring practical results in the more politically clean states ere long. Municipal politics is *the* weak place in American government, and places in the sanitary service of most of our cities are hard to get without influential backing. The large corporations, railroad companies, manufacturing concerns and other large employers are doing a great deal of "welfare work" and some of them are showing an inclination to employ a trained physician and sanitarian as a part of the regular staff.

The demand for trained men is increasing. It is like any specialty; time demonstrates its usefulness or the opposite. When the trained sanitarian shows the justification for his calling, as he has in the army and navy, in tropical exploitation and in large undertakings, such as canal digging and in suppressing epidemics, he will find a career ready made. Modern life has created many unusual demands and trained health officers promise to be one of them.

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Thus far, the financial rewards for public health work are inadequate for securing and retaining the able men who are arising. Men in large numbers are learning the practical work of the medical health officer while filling subsidiary positions under the numerous boards, and they are looking for advancement. When it comes too slowly they drift out of the health work and into medical practice. It it found not to work out well for a health officer to practice medicine. This limits the income of the men engaged in health work. Also these men coming up the line are more apt to secure good appointments than is the man with a sheepskin and scant experience.

Permit us to advise the middle-aged doctor to keep on practicing and cease to dream of an easy position in a health board. There is a lot of dusty or cold driving, of poking around in dirty surroundings, of contention with ignorant people and underhanded opposition upon the part of intelligent and influential ones, oposition from press and disgruntled quarantine victims, lack of appreciation where most should be given and a host of annoyances not necessary to mention. The successful health officer is seldom a gentleman of kid gloves and a luxurious office suite. It is work and fight from the word go. The easy jobs come from the easy political boss.

On the other hand, let us urge the young men in the profession to consider the claims of the public health service. A young man can fight effectively and he can adapt himself. The school courses are most excellent, but we believe a young medical graduate trained in sanitation should not expect too much at first. Let him accept a small position under a good board presided over by a *real* sanitarian and work his way up. It is like railroading: most successful railroad officials come up from the ranks.

We are acquainted with many health officers of all shades of efficiency or the lack of it. It is our observation that an industrious and capable man usually succeeds in securing good appointments. The other type of health officer finds it necessary to resort to political expedients to maintain his position, and he soon degenerates into a mere ward politician.

Pointers.

Calf's liver in summer is, next to fish, the best ptomaine generator we know.

Some of the new paper milk bottles give the milk an unpleasant flavor.

Take care of the refrigerator and you will not so frequently blame the baker, the butcher and the milkman.

Next time you get the idea that medicine "is going to the dogs," read an old clinical treatise of forty years ago.

When your feet get tired and sore this hot weather, bathe them in hot water and witch hazel, dry them and powder with almond meal.

Get your old bronchial patients off their customary dope during the "good old summer time" and substitute an aromatized solution of nitric acid and watch results.

When you go to Los Angeles take in the Grand Canyon of Arizona on your way back. Horseback on the canyon trails will make you sore for a week.

Take a good agricultural journal. It will interest many people waiting for you and may "put you wise" as to some of those distant land investments.

The ladies of the Civic Club think the doctors just lovely when the Medical Society invites them to hear papers along joint lines of interest. They may even forget Christian Science.

We have just attended an enthusiastic session of the B. L. B. (Busted Lung Brigade) at a big dispensary. They were sure a lusty lot of "lungers." Eggs were high in that town.

A Possible Cure for Pyorrhea Alveolaris.

Physicians who give proper attention to their own teeth and those of their patients know what a very serious disease and how formidable to attack is pyorrhea alveolaris. They also know how it affects the general health of the patient until, one by one, the teeth are finally sacrificed by it, like forest trees before a blight, until before middle age, all are gone.

We call the particular attention of our readers to the article in this issue outlining a successful treatment of this condition.

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Original Articles

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Sentences, like sunbeams, burn deepest when most condensed.

Chronic Joint Affections.

By GWILYM G. DAVIS, M.D.,
Philadelphia.
Professor of Orthopedic Surgery, University of Pennsylvania.

Joint affections may be classified as follows:

Traumatic—Occupation or wear arthrites, contusions, sprains and non-infected wounds.

Infectious—Pyogenic—from wounds, or through the blood; Gonorrhoeal; Acute Articular Rheumatism, Typhoid Fever, Exanthemata—Tuberculosis, Syphilitic

Trophic—Atrophic or Rheumatoid Arthritis, Hypertrophic or Osteo-Arthritis, Gouty Arthritis, Hemophiliac Joints.

Neuropathic—Charcot's Joints (ataxic), Syringomyelia, etc.

In briefly considering these affections, more especially from the standpoint of their recognition and conservative treatment, let us begin with the Traumatic Class. Their recognition is usually easy, but at times traumatism may be mistaken for disease. This is sometimes so when cases of painful feet, suddenly developing from overtaxing the part, are mistaken for rheumatism. Sometimes it is impossible to say where the effects of traumatism cease and disease begins. Thus distinct chronic troubles follow injuries, sometimes fractures, in the neighborhood of the joints (especially the wrist). Fractures of the hip are frequently followed or accompanied by stiffness of the knee. In these cases the trauma seems to act as a starting cause of a chronic trouble, which appears to be of a distinctly rheumatic character, and which persists long after the traumatism is apparently healed.

In the treatment of traumatic cases, conservative methods are especially suitable. We have to deal with the results of violence without infection. The indications are—first to quiet the reaction caused by the violence by 1 Rest, by abstinence from the causative occupation; by splints and bandages. 2 By position, as elevation of the injured limb. 3 By cold, as ice cap or in the case of sprains by the local use of ice-water, which in recent cases will reduce the swelling almost immediately. Later, means must be taken to restore the normal use of the part by massage, passive movements, exercise, baking, and finally the use of some support in the shape of splint, brace or bandage, which will protect the part from a repetition of the traumatism. This is especially the case in the knee, and its lack is the reason why injuries to the knee are often so long in healing.

Infectious Diseases.—The recognition of an infectious element in joint troubles is important, but not always easy. It is not always possible to draw a sharp line of demarcation between inflammatory joint affections, due, presumably, to some infection, and those due supposedly to trophic disturbances, as in some cases usually characterized as rheumatoid arthritis. Especially when a joint trouble is mon-articular, a focus of possible infection should be sought. If necessary, the tonsils should be removed; the accessory nasal sinuses should be examined; the teeth properly fixed; the intestinal tract cleared out, etc. The joint condition may possibly be kept alive by poisons being continually poured into the system by one of these foci.

In joint infection due to traumatism and pyogenic organisms, conservatism is not to be carried too far. If distension takes place tapping, under strict antiseptic precautions, should at once be resorted to. If after two or three tappings reaccumulation occurs, and especially if the fluid is purulent, the joint may be washed out through the tapping canula with salt solution; carbolic acid solution, 1 per cent.; bichloride solution, 1 to 4,000, or even iodoform glycerine, 10 per cent., may be injected. My experience with this line of treatment has been very satisfactory.

If open incision becomes necessary, then the Bier congestion treatment, by means of a constricting rubber band, may benefit and alleviate pain. Vaccine or bacterine treatment is regarded as being unsuitable for employment in acute cases.

In *gonorrheal* cases, where effusion is not marked, and if the part affected allows

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of its use, Bier's congestive method should be given a trial. In other joints, as the hip, a plaster of paris splint should be applied for purposes of immobilization. Hot water bags and the use of narcotics may be necessary.

In *pneumococcic, typhoid* and *exanthemata* infections, effusion with tension frequently occurs early and has a marked tendency to produce pathological luxations. For this reason operative rather than conservative measures should be resorted to, and the joint should be tapped and even washed out with or without an antiseptic fluid. When a typhoid infection attacks the spine, it gives rise to considerable pain and quickly proceeds to a more or less complete ankylosis. These cases should be kept quiet with plaster jackets, etc. For the ankylosing and stiffness of the joints of the extremities following infections, the usual means of massage, passive movements, bakings, etc., must be employed.

In joints suspected to be *syphilitic* a Wassermann reaction should immediately be sought for to aid in forming the diagnosis. The affection manifests itself especially in children, and should be treated by splinting the joints, applying mercurial ointment to them, and giving the usual constitutional treatment internally or the newer remedy of Ehrlich, salvarsan.

In *tuberculous joints,* treatment can only briefly be alluded to. There are certain main principles which are of vital importance. Conservative treatment is preeminently suitable for children, but radical treatment is usually preferable for adults. There is practically only one way of curing tuberculous joints in childhood, and that is by rest. Even if operative means are employed, rest and absolute quiet are essential. The success of the treatment depends on the efficiency of the means used to keep the joint quiet. This point is not sufficiently appreciated. If a child is not improving put it at once to bed and strap it down to keep it from moving. I am convinced that it is a mistake to attempt to improve a tuberculous joint by attention mainly to the general health and neglecting the local condition. A movable tuberculous joint will continue in a more or less active condition, notwithstanding an apparent improvement in the general condition. I have seen this many times in the children sent for a few weeks to convalescent homes. Their joints returned worse than when sent away. It is for this reason that I cannot approve of the short plaster splints and ambulatory treatment of the Germans, and it is because the rest is so much more efficiently carried out in hospitals than at home that the results in hospitals are so much the better. Of course, general treatment, such as sleeping with the windows open, generous feeding, etc., should not be neglected.

Bier's hyperemic treatment, by means of a rubber band, often improves tuberculous disease of the extremities, but beware of baking and hot applications; they aggravate the disease. Sinuses are to be treated by injections of soft white vaseline, to which about 2 per cent. of iodoform or bismuth subnitrate has been added. This may be melted and injected twice a week. Here the vaccine treatment is suitable and may be found of service.

In *rheumatism,* even when the acute symptoms have more or less subsided, the salicylates or other antirheumatic remedies may be given a trial, but do not continue them indefinitely. Give them in fairly large doses for one or two weeks and if no effect is noticed, discontinue them.

Bier's congestive treatment is often efficient in relieving pain. Encircle the limb with a rubber bandage until the distal part looks congested, but is not painful; allow it to remain for 10 or 15 minutes twice a day and then gradually increase until it can be left on the major portion of the day.

Rheumatic attacks are apt to leave not only stiffened joints, but also weakened hearts, and such people are bad subjects for subsequent treatment, especially under anesthesia, which may be necessary to restore the lost motion.

A point to be noted in making passive motion is, that violence will cause the local symptoms to reappear and the joint to stiffen more than ever. Coaxing rather than forcing is the motto Baking is allowable, and is valuable preceding moderate passive movements and massage.

Trophic Affections.—Those grouped under the terms: rheumatoid arthritis, rheumatic gout, osteo-arthritis, arthritis deformans, etc., are by some regarded as the result of infectious processes. They are the most troublesome of all joint diseases. Their origin is obscure, and their treatment frequently unsatisfactory.

The so-called rheumatoid arthritis so often seen in young people certainly often

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acts as though it were an infectious and not a trophic disturbance. Hence it is one's duty to examine the economy thoroughly to recognize and eliminate all sources of possible infection. This having been done, attention is to be paid to the alimentary canal. It should be cleaned out with salines and attention paid to the diet.

As regards more or less specific remedies, tablets of thymus gland or thyroid gland may be tried. They have appeared to be efficient in some cases. Five-grain tablets of one or the other may be given three to four times daily, and even increased. Exposure to the X-rays has lessened the pain in some instances and may be worth a trial. Iodide of potassium in the chronic cases appears at times to be an efficient remedy. In this class also, especially when single joints are affected, massage and electricity to the part with moderate passive motion is often of service; tonics, cod liver oil and nutrients generally and a building-up regime, with out-of-door life and not too laborious occupation should be advised. Baking helps some cases. If the joints are very painful, put on a plaster cast and keep the patients more quiet. I recently met a medical friend whose hands were somewhat stiffened by this disease, and on inquiry he informed me that he had had the trouble several years. At first he thought it was going to seriously cripple him, but that on a building-up treatment, and attention to his diet and habits, the disease had become stationary and had so remained for a long time. This should encourage us to persist in treatment which at first may seem of little effect. In some cases the joints, particularly the hip, may be so loose as to cripple the patient. Here apparatus ingeniously devised will often be of the greatest value.

Concerning hemophiliac joints, attention may be called to the use of thyroid extract, as advocated by Dr. Wm. J. Taylor in bleeders.

In *neuropathic diseases,* like the loose joints which occur in locomotor ataxia, much may be done with supporting apparatus. There is much temptation to resort to some operative measures, but do not do it as healing is liable to be bad. Remember that perforating ulcer is one of the complications of this affection and everyone knows it is difficult enough to heal. Tapping and drainage are more dangerous procedures than in other affections. In the shoulder, great benefit was once obtained by using a simple elastic shoulder cap, and the man continued his occupation as a trombone player. Loose knees are also much benefited by supporting appliances.

1814 Spruce St.

The Possible Origin of Pyorrhea Alveolaris and the Philosophy of Its Treatment.

By Joseph Head, M.D., D.D.S., Philadelphia.

The disease of pyorrhea alveolaris, in spite of its name, is not always associated with a flow of pus from the infected tooth sockets. As a matter of fact, pus does not appear in 25 per cent. of the cases. The main symptoms are inflammation of the peridental membrane, bleeding of the gums at the slightest touch and tendency for the teeth to elongate and be sensitive to mastication. Finally, the gums separate from the root of the teeth, forming pockets where salivary calculus and infection cause such centers of irritation and disintegration that the destruction of the teeth involved is only a question of time unless the tartar is removed from the root, the mass of infection destroyed, and the gum stimulated to reattach itself to the root.

Pyorrhea alveolaris unquestionably has a systemic as well as a local origin. It is frequently associated as a symptom of Bright's disease, diabetes, cardiac, hepatic or renal diseases. Gout, syphilis and tuberculosis, also, by their debilitating effect on the tissues of the mouth so lower the vitality of the gums that infection that otherwise would remain superficial, penetrates the peridental membrane. This infection, having penetrated the gums, forms a small abscess that partly strips away the peridental membrane from the tooth neck, forming the pocket, which, once being formed, continues the disease even after the general systemic disorder has been conquered.

It is probable that, where no systemic condition is found associated with pyorrhea alveolaris, some one of the numerous passing diseases, such as typhoid, measles, grip

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or even a bad cold, has temporarily lowered the physical resistance of the gum tissue to the point of permitting the ever-present infection to penetrate and form the self-perpetuating pockets, thus leaving the pyorrhea to continue without apparent systemic cause. Where the systemic cause has passed and the disease can be successfully treated by local means alone, a permanent cure can be hoped for. But where pyorrhea is associated with serious general disorder, all local treatment should be considered as purely palliative until the predisposing general disorder is brought under control.

Until recently, instrumentation that removed the tartar scales from the roots beneath the gums was the chief reliance for the cure of pyorrhea alveolaris. It is true that various medicaments, such as 75 per cent. lactic acid and 50 per cent. sulphuric acid, were used with the idea of softening the scale and rendering it more easily removable. The great objection to these medicines lay in the fact that when diluted by the fluids of the mouth they would attack the enamel of the teeth more rapidly than the tartar.

A number of dentists have been able to tighten single-rooted teeth, partly by scaling and partly by splinting to adjacent firm teeth, but in cleaning the calcareous deposits from the bifurcation of roots, only a few dentists have really succeeded, and some of these, by the ruthlessness of their instrumentation, have at times caused unjustifiable injury to the cementum and pulpal vessels. It has also been noted that deep pockets occasionally appear around a tooth that is sensitive and loose during mastication, and yet the most careful manipulation of the scaler has failed to show the presence of tartar scale. This seems to prove that the tartar scale may not be the prime cause of pyorrhea alveolaris, and it also seems to prove that the mere absence of tartar is not a sufficient circumstance to effect a reattachment of the gums to the tooth.

An agent that would remove the last microscopic scale from the tooth, and would also remove any crystalline deposit from within the adjacent tissue, has evidently been needed. It has been appreciated by the thoughtful dentist that gout deposits might be laid down in any tissue of the body whatsoever, and that if such a product should be deposited in the arterioles of the gum circulation, no instrumentation or remedy could be effective until the arterioles of the gum tissue were effectually freed from such infiltration. In other words, where the deposit has been confined solely to the root of the tooth, instrumentation might possibly succeed in causing reattachment of the gum and root, but where the deposit was in the gum, reattachment could only be obtained by stimulating solvent that would free the gum and peridental membrane of its crystalline deposit, and in so freeing them, stimulate them to form a mutual reattachment.

Some five years ago it was my good fortune to discover that commercial hydrofluoric acid would disintegrate tartar with no macroscopic action on either the cementum or enamel of the tooth. The poisonous action of this acid precluded its use as a therapeutic agent to be applied to the gums. However, through an extensive series of experimentation it was proven that a 20 to 23 per cent. solution of bifluoride of ammonium (an acid salt of hydrofluoric acid) will disintegrate the tartar on a tooth as readily as hydrofluoric acid itself, and also leave the tooth apparently unsoftened. Later experiments have shown that this solution can also be applied to the gums with the most beneficial effect, as it seemingly stimulates the tissues and diseased bone to such healthy action that deep pockets around loose teeth speedily fill up with healthy, firm tissue, and the sensitive teeth, reunited to the gum, become secure and useful agents in the process of mastication.

The solution of bifluoride of ammonium can be injected once a week into the pockets around loose teeth. After one or two injections the soreness will largely disappear, and all the tartar scale that could not be easily and painlessly removed at the first two sittings tend to be so loosened that its thorough removal by the scalers is easy for both patient and dentist. After four or five applications, one week apart, black scales that have escaped the scaler will sometimes be found floating loose in the pocket, so that they can readily be picked out, and the root will be as smooth as velvet to the touch of an instrument. When this stage has been reached it will be found that the scalers cannot be carried as deeply into the pyorrhea pockets as was easily possible in the beginning. To do so causes pain and a free flow of clean arterial blood. This indicates that new granulations are form-

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ing, and they should not be ruthlessly broken up, although a careful exploration for tartar on the root within the pocket is always advisable. Reattachment of the gum to the root, however, can be accepted as assurance that that portion of the root has been thoroughly cleaned, and so the scalers need not be driven into the reforming tissue with the idea of being extra thorough. When this point has been reached we can cease the use of the scalers and merely make weekly applications of the bifluoride solution. If, however, at the end of two or three months the pockets have not entirely healed, they should be re-explored with the scalers and the treatment repeated as for a new case, although most of the pockets by this time will have disappeared, and the gums, with a slight contraction at the neck, will be found firmly adherent to the tooth.

Teeth that have lost more than half their gum attachment, under this treatment have become firm and comfortable to the action of normal mastication. In fact, such tightening has been obtained after there has been so much loss of tissue that the question has arisen whether the immobility is not occasioned by a process somewhat similar to the bony ankylosis that occurs during implantation. However, it seems to be a normal and permanent tightening, and has now in some cases lasted during a period of four years. With loosened teeth, where the pockets are unaccompanied by the presence of calcareous deposit, the weekly applications of the bifluoride solution cause the gums to rapidly reattach themselves to the teeth without the use of the scalers at all, and the soreness and gum inflammation rapidly disappear. So long as these results were obtained only by me, it was natural to entertain the thought that I might be over-optimistic, and that the therapeutic action of the bifluoride solution was too remarkable to be true. But since hundreds of dentists have used it for the last two years with a great measure of success, and the more they follow directions the greater the success, I can now feel that my missionary work in this line is largely at an end. The verdict of the future can safely be trusted to give the bifluoride its true position in the therapeutic dental world.

Having stated the actual clinical facts relating to the bifluoride of ammonium, a few theoretical speculations on its possible physiological action may not be uninteresting. In the first place, the fluoride salts have been known to be strongly antiseptic during a period of some thirty or forty years.* They have been used in the manufacture of beer. In the seventies Thompson found that a 0.61 per cent. solution of sodium silicofluoride is non-irritating to wounds, and antiseptically stronger than a 1-1000 bichloride of mercury solution. This may prove valuable as a mouth wash and is a field I am at present investigating. Be that as it may, the fluorides have only been known as valuable antiseptics. But the bifluorides, where the hydrofluoric acid has been only half neutralized, have been discovered at a comparatively recent date, and the fact that free hydrofluoric acid is so widely known as a frightful poison has, no doubt, discouraged therapeutic investigation in this direction. The interesting discovery that hydrofluoric acid would disintegrate tartar without hurting the teeth impelled me to investigate the therapeutic value of this acid, and Fortune favored dentistry in giving us the bifluorides that seem to have the therapeutic value of the pure acid without any of its terrifying dangers.

In considering the physiological reaction of the bifluoride of ammonium, it is not unreasonable to suppose that it not only softens the tartar about the tooth, but that it also dissolves out any microscopic calcareous infiltration that may be present, either in the peridental membrane of the root or the adjacent tissue. Its great penetrating power would be especially valuable in dissolving the calcareous deposits within the arterioles, thus, as it were, revivifying and rejuvenating the gums, which thereby take on a new lease of life and development. This explanation may or may not be true, but it is at least a partial reason for the almost miraculous reformation of rigid tissue that at times occurs between teeth where the bony septum and gum have entirely disappeared, leaving a large hole. If the bifluoride solution can so stimulate connective tissue cells, there is no reason why it could not also stimulate the osteoblasts and cause a redevelopment of bone. The fact that the fluorides are strongly antiseptic is but another reason why the revivified tissue should be able even more rapidly to set about its work of repairs. Nevertheless, interesting as these speculations are, they are at present only speculations, and until they are proved or disproved by

*See Rideal's Disinfection and the Preservation of Food, page 79, third edition, 1903.

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scientific investigation, we must content ourselves with the fact that the judicious use of a 20 to 23 per cent. solution of bifluoride of ammonium can hasten the tightening of teeth, and repair the lost tissue.

Let us now consider some of the other essentials in the cure of pyorrhea, of equal importance with the judicious use of the scaler and the bifluoride of ammonium solution. Any malocclusion should be remedied, so that the loose teeth may be relieved of the excessive pressure of mastication occasioned by the thickening of the inflamed peridental membrane. When the pocket has approached an apical foramen near enough to infect the pulp, the pulp should be destroyed and the root canals thoroughly treated and filled. This should be especially looked to in the case of molars where the pocket extends through the bifurcations, and down to the tip of one of the roots, It is sometimes excellent practice to cut the crown midway through the grinding surface, through the juncture of the roots, extracting the diseased root with its side of the crown. This prepares the other root or roots, so that they can be filled and cleaned as easily as a bicuspid. With upper first molars this operation is most satisfactory, as it leaves the mouth, to all outside appearance, unchanged. This operation also makes it so that the remaining root or roots do not have to stand more than their fair share of mastication, and so works for greater stability and a more rapid recovery.

The patients should always be properly instructed how to keep the mouth clean. This is a most important essential, which is frequently neglected. We tell the patients to brush the teeth morning and evening with the tooth brush, and yet we too often allow the back teeth to be covered with bacterial deposits day in and day out, that could easily be removed by the proper use of the brush. Dr. Black tells of a case of erosion where, to prove that the brush never went back on the molars, he made a mark on a bacterial plaque in the back of the mouth, and when the patient returned in a day ar two, he found the same old plaque and the same old mark undisturbed. He did that for a scientific purpose. But how many of us find the same state of affairs in the daily routine of our practices?

The upper and lower wisdom teeth decay simply because they are not cleaned. Structurally they are not weaker than any of the other teeth. At each visit of a patient we should make an examination of the buccal necks of the upper and lower twelfth-year molars and wisdom teeth, and see if the bacterial plaques have been accumulating since the last visit. If they are present, and they frequently are, the patient should be given a tooth brush and should be told how to remove the plaque by brushing. Nine-tenths of them will not succeed, and then it is distinctly our province to show them how to remove the plaques by brushing, *and see to it that they do know how.* For tooth brushing is a great art, and this art has been retarded by much contradictory teaching. We talk about keeping the teeth clean with a tooth brush, and we do not sufficiently take the pains to see if the plan of our instruction is effective, or to see if our instruction is carried out.

The final test of a method of brushing the teeth is—does it leave the teeth clean? As a matter of fact, few patients keep the teeth clean except with careful coaching on the part of the dentist, who, each time the patient comes to him, should not only point out where the bacterial plaques remain undisturbed, but should demonstrate how the brush should be used to remove these plaques. I believe that the gums, as well as the teeth, should be thoroughly brushed twice a day of all bacterial plaques, and I have proved on my patients that healthy gums are no more injured by a good brushing than is the skin adjacent to the finger nails. Inflamed soft gums will unquestionably be made sore for the first week or so, but with persistence on the part of the patient and assistance on the part of the dentist in touching up the sores with nitrate of silver, the gums will soon become inured to almost any friction the tooth brush can give them. Instead of insisting that the patients shall completely cleanse all of the teeth and gums with the brush, many of us are satisfied to let the patient brush only the teeth anterior to the sixth-year molars, and in lieu of an antiseptic we recommend the use of tooth powders that erroneously claim to have an antiseptic oxygenating action, when any amount of such powders capable of being placed on a tooth brush does not liberate enough oxygen to make over three or four drops of a one per cent. solution of peroxide of

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hydrogen. And yet for this so-called antiseptic action of three or four drops of one per cent. peroxide of hydrogen on the large masses of bacteria usually found in the mouth, which action is no more valuable than distilled water, our patients are allowed to scrub the front teeth prettily clean, while they cut away both the enamel and the cementum. Bristles charged with chalk, not to speak of cuttle-fish bone, and pumice, will wear away both cementum and enamel, but bristles wet with water or a mild antiseptic, can clean teeth of bacterial plaques without erosion. All discolorations that cannot be removed except with grit should be removed by the dentist, not by the patient.

Then first and foremost in the treatment of pyorrhea we should teach the patient to brush the teeth clean. We should explain that there can be no permanent cure unless the teeth are kept clean. Secondly, he should be told that as the tooth brush cannot get in between the teeth, "morning and evening the bacterial plaques should be swept away by the careful use of floss silk." Thirdly, he should be told that a mild antiseptic solution should be held in the mouth for not less than two minutes morning and evening. Any available antiseptic that can be held in the mouth cannot kill the masses of bacteria such as are found in bacterial plaques. A mouth wash can kill only the outside layer of such a mass, leaving the germs next to the tooth and gum free to go on with their work of destruction. But a good antiseptic wash, if it is held in the mouth sufficiently long, can kill or inhibit the action of the thin bacterial film left after the proper use of the floss silk. Having carefully instructed the patient in the home prophylaxis that all patients should observe each day, after the pockets have been healed and the teeth have become firm, it ought not to be difficult, with continued supervision, to keep him permanently comfortable.

In closing, perhaps it would be well to tersely run over the steps of my treatment of pyorrhea:

Take off all tartar that can easily be removed and cleanse the mouth as thoroughly as can be painlessly accomplished, at the same time instructing the patient in the use of the brush, floss silk and mouth wash, pointing out particularly where he fails to reach the bacterial plaques, and demonstrating what motions of the brush are necessary to remove the plaques. The syringe should then be filled with bifluoride of ammonium and the platinum point inserted near to the bottom of the pocket or pockets, which should be filled full from the bottom to the top. During the operation of injecting the pockets, the cheek and tongue may be guarded with napkins, with which all excess or overflow should be wiped away. Then the patient should be allowed to spit for a minute or two, when the mouth may be slightly rinsed with water to remove any excess of acid. Less irritation to the mucous membrane occurs from this method than that formerly advocated, which consisted in allowing the solution to rest in the pocket for a minute or two minutes.

The patient is then dismissed, with the instruction to return in a week. He is also cautioned to carefully observe all directions on home prophylaxis. When he returns next week, the teeth are again scaled as far as feasible, cleaning them thoroughly with brush and pumice, and a coating of tincture of iodine. When this is finished, another application of bifluoride is made as before. The procedure for the third sitting is as for the second, but usually after that the teeth are free from tartar, the pockets have started to heal, and the treatments need be for a period of only about fifteen minutes, just long enough for the application of the bifluoride, and the little cleaning and scaling required. The bifluoride should not be applied oftener than twice a week, and usually once a week is more desirable. Of course loose teeth should be tied to their secure neighbors wherever feasible.

We should also be ever watchful for any systemic disease of which the pyorrhea is a mere symptom. As above stated, pyorrhea is frequently associated with gout, diabetes, Bright's disease and other bodily disorders that directly affect the cell metabolism of the various tissues. These diseases may or may not be present, but wherever a pronounced case of pyorrhea presents itself for the first time, it is wise, conservative treatment to request a urine examination, and the friendly cooperation of the family physician.

1500 Locust street.

Norway and Vaccination.

Norway to-day is one of the healthiest countries in the world. One item which contributes to her national health is the fact that no man can vote unless he is *successfully* vaccinated.—*Pacific Med. Jour.*

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The Vaccine Treatment in Gonorrheal Infections.

By G. H. SHERMAN, M.D.,
Detroit, Mich.

Gonococcus vaccine is being much more commonly used in treating gonorrheal infections, showing an increasing confidence in its therapeutic value. There still exists, however, a large variety of opinions, many being very enthusiastic about the results that are being obtained, while others think no material benefit is derived. This is not to be wondered at when we consider that there are still physicians who consider diphtheria antitoxin either useless or dangerous in treating diphtheria. The estimation of the value of gonococcus vaccine depends largely on the viewpoint of the individual user and the kind of cases in which the vaccine was used. If we expect to cure acute gonorrhea or old chronic cases, in which other accompaning infections are ignored, with a few inoculations of gonococcus vaccine, disappointment must be expected.

When a gonorrheal infection exists the problem of immunity at once becomes an important factor in successfully treating the case. Gonorrhea is essentially a surface infection with a tendency to extend to deep-seated structures. The value of a vaccine consists in its specific influence in increasing the phagocytic power of the blood, thus hastening the establishment of an immunity, and naturally it will act more promptly where the infection is of such a nature that the blood comes thoroughly in contact with the germs. It is for this reason that acute gonorrhea, deep-seated infections, orchitis, epididymitis, swollen lymphatic glands, etc., respond much more promptly than the superficial infections. In these cases marked improvement is usually found in twenty-four hours after the first inoculation, and in three or fours days the pain and swelling will be well under control.

The following case reported by Jamison (*Therapeutic Gazette*, May, 1910, page 313), illustrates this point very well.

"Mexican, aged twenty-three, married, clerk, came to me on October 4, 1909, complaining of swelling of the left epididymis and testicle. He had contracted a gonorrhea in 1906, which lasted for two months. It again appeared four or five months afterward, but only lasted a short time. Since then he has had a slight discharge from time to time.

Examination showed the left testicle and epididymis to be swollen to the size of a small orange, tender, and very painful. The pain and tenderness extended up the cord as far as the internal ring. Temperature, 102 degrees.

Having no vaccine at hand, I painted the scrotum with guaiacol, supported the testicle, and ordered a purge and rest in bed. Two days later he came back saying that the pain was not relieved and that the swelling was increased. I gave him 15,000,000 of vaccine. On the 8th the pain was less, the temperature normal, and he felt better generally. Injected 25,000,000. On the 10th he received 50,000,000. Two days later he reported that the pain was entirely gone and the swelling was reduced by one-half. Fifty millions more were given, and on the 18th, when I saw him again, the testicle was normal, there was no induration of the epididymis, nor tenderness on handling. There was no discharge from the meatus. The first urine was clear and contained one small mucoid thread; the second was entirely clear.

The striking points of this case are: (1) Absence of pain at the site of injection. (2) Rapid diminution and disappearance of the pain in epididymis, testicle and cord. (3) Rapid resolution. (4) Rapid fall in temperature.

Pain at the site of the injection I have found in every case in which the dose was too large, and, moreover it seemed to be in direct ratio to the toxicity of the dose. In other words, the more pronounced the negative phase, the greater the pain at the site of injection. If the dose is too large it is sometimes followed by increase of pain in the affected part and elevation of temperature. Excessive intoxication may cause a fall in temperature, and a rise may follow the immunizing process."

B. Wallis Hamilton (*Journal A. M. A.*, April 9, 1910, page 1198), after an extensive use of stock vaccines in vulvovaginitis in children, concludes that: "Vaccine therapy has a place in the treatment of this infection in little children for the following reasons:

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1. The short time required for a cure in over 85 per cent. of cases.
2. The ease of administration of the vaccine, no special apparatus or knowledge of technic being necessary.
3. The vaccine is apparently harmless when used under aseptic precautions.
4. It is not necessary to take the opsonic index, with its complicated technic.
5. It eliminates irrigations, which direct the child's attention to its genitals, at times encouraging precocious masturbation. The frequent douches necessary in the irrigation treatment will, with the best of care and gentleness, produce some injury when continued over a long period of time."

An essential element in treating acute gonorrhea is to avoid deep-seated infections. This is most effectively done by rendering the individual immune with gonococcus vaccine. Not only does this immunizing process resulting from vaccine inoculations hinder the development of deep-seated infections, but the surface infection is also materially improved, as indicated by much less discharge and pain. In some cases the discharge will almost entirely disappear in two weeks without any other treatment, but the infection will not become entirely eradicated, because the germs will continue to develop on the surface where phagocytosis cannot take place. It is for this reason that local treatment, to take care of the surface infection, should be employed in conjunction with the use of the vaccines.

Inoculations should be made at intervals of from two to five days and continued until the case is well under control, and at one week intervals after that. After the second or third inoculation the generally recognized local treatments should be applied to take care of the superficial infection. It is well to start with a dose of 10,000,000 and, if the case progresses favorably, the same may be continued. In stubborn cases the dose may be increased to 50 or 100 millions. If the patient has not developed much resistance against the gonococcus, these larger doses may cause considerable irritation or inflammation where the inoculation was made. For this reason it is preferable to start with the smaller and work up to the larger dose if necessary.

Chronic Gonorrhea.

When gonococcus vaccine first came into use, many physicians tried it first on old chronic cases, and if they did not get results at once concluded that the bacterial vaccines were of no use, never realizing that these cases are nearly always mixed infections, the staphylococcus being the accompanying infection. To give gonococcus vaccine in these cases, and not to take care of the staphylococcus albus infection as well, is of little or no avail. Doctor Robertson (*Journal A. M. A.*, September 4, 1909, page 797) is of the opinion that, in prostatic infections after gonorrhea, the staphylococcus albus is the real pathogenic organism, coming in as a secondary infection after the gonococcus has paved the way. The results obtained in his reported cases treated with staphylococcus albus vaccine certainly show that his contentions are well grounded. He gives staphylococcus albus vaccine in 400,000,000 doses every other day for three successive inoculations, and thereafter once a week until the case is cured. Generally recognized local treatment is also employed at the same time.

Good results are also obtained with a combination of gonococcus and staphylococcus albus vaccine in chronic gonorrhea. In treating these cases the necessity of taking care of the surface infection with the usual local treatment, should be borne in mind, the vaccine being used to get rid of the germs located deeper in the tissues, which the local treatment does not reach.

The dose in these cases will vary from 25 to 100 millions of gonococcus, combined with 100 to 400 millions of the staphylococcus albus vaccine, repeated at intervals of from five to seven days.

In these chronic cases, treatment must often be continued for two months or more, and the dose gradually increased until the case is under control. I have given as high as 400,000,000 gonococci and 1,600,000,000 staphylococci to a dose in these cases, repeated at one week intervals. When these large doses are given, it is preferable to make inoculations at two or three different points. In this way excessive local irritation at any one point is avoided.

This combination of gonococcus and staphylococcus albus vaccine is also being very advantageously employed in tubular

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and other infections in women. This will apply in acute as well as chronic cases. In these cases inoculations should be made as indicated above.

Gonorrheal Rheumatism.

Gonococcus vaccine is now regarded as the most efficient remedy in the treating of gonorrheal rheumatism. In discussing this subject B. A. Thomas (*Journal A. M. A.*, January 22, 1910, page 2548) says: "I, myself, have observed almost incredible results in gonorrheal arthritis treated by bacterial vaccines. Moreover, the vaccines in acute conditions, in my opinion, have superiority in usefulness over serum as a therapeutic measure."

In these cases it is not always an easy matter to determine whether we have a case of gonorrheal or ordinary rheumatism to deal with. If a man has rheumatism who has had gonorrhea, it does not necessarily follow that that is gonorrheal rheumatism. Where the diagnosis is clear, the results in treating gonorrheal rheumatism with gonococcus vaccine are uniformly good. Where the diagnosis is doubtful, the vaccine treatment will often aid in clearing the matter up. If no improvement is noticed after a few inoculations of gonococcus vaccine, the case is not liable to be gonorrheal. If the case clears up the diagnosis is clear. Treatment should be started with 20,000,000 to a dose of gonococcus vaccine, the inoculations being made at intervals of from five to seven days. If little inflammatory reaction is produced at the point of inoculation the dose should be increased to 50,000,000 or 100,000,000 organisms or more. Where no marked improvement is observed after the third or fourth inoculation, the case should be treated with streptococcus vaccine, as a case of ordinary rheumatism.

419 St. Aubin Avenue.

Death From Taking Fifteen Grains of Veronal.

The British *Medical Journal* records a case of accidental death from veronal poisoning. The number of deaths following the administration of this commonly used sleep-producing drug has reached an appalling figure, such, indeed, that the London *Lancet* recommends that restrictions be placed upon its sale. In this particular instance the victim of the accident was a lawyer who had suffered for some time from insomnia and sometimes took drugs for its relief. At 3 A. M. he took 15 grains of veronal. At 7 A. M. he became unconscious, and in spite of competent medical assistance, died about 9 A. M.—*Western Med. Record.*

The Care of the Broad Ligament Stumps Following a Hysterectomy.

By George S. Foster, M.D.,
Surgeon and Pathologist to the Hospital Notre Dame de Lourdes,
Manchester, N. H.

Hysterectomy is one of the most formidable operations known to surgery. When such an operation is performed we, as surgeons, not only, as in all major operations, take the life of a patient in our hands, but we as well assume the responsibility incurred by working about the more delicate anatomical structures of the human body.

Confronted by prominent nerve plexuses, large arterial and venous tubes, and with the rectum and bladder so near at hand, every surgeon who cares for his work makes a most careful and intrinsic study of the pelvic anatomy before attempting to operate. One review of this part of our body does not suffice. On the contrary, we must, as careful students, review over and over again the anatomical relations of the pelvic contents. No one can become too well informed regarding this subject.

To properly care for the stumps of the broad ligaments following a hysterectomy the functional anatomy of each part must be ever kept in mind.

Anatomy of the Female Pelvis.

First of all a careful examination should be made to discover whether or not there be an arrest in the development of the bony pelvis. If such a condition be present, the anatomical contents must be dealt with as a personal equation. By eliminating such a condition we are thereby free to deal with the pelvic contents in general. Any deformity from early rickets should be noted if present.

The so-called "diaphragm of the pelvis" is made up of the Levator Ani and Coccygeus muscles on either side. As is well known, the Levator Ani muscles form the floor of the pelvic cavity, attached as they are to the inner surface of the side of the true pelvis, and meeting each other at the point of the coccyx, anus and sides of rectum. The Coccygeus is a muscle firmly interwoven with tendinous fibers. Inserted into the coccyx and lower sides of the sacrum, it readily closes and gives firm support to the posterior parts of the lower

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pelvic cavity. This pelvic diaphragm is firmly supported by the pelvic fascia, fat and fibrous tissue. Upon these structures rests the contents of the pelvic cavity.

The uterus and its appendages are arranged normally so that each part functionates in co-operation with every other part. The uterus, fallopian tubes and ovaries are supported by ligaments and fibrous tissue. These structures always tend to keep in place the respective parts to which they are attached. The eight ligaments of the uterus are most useful in their support of that organ. Six of these ligaments are formed by the peritoneum, the round ligaments being composed of muscular tissue thrown off from the uterine body. This muscular tissue of the round ligaments is supported by a stroma of fibrous and areolar tissue, blood vessels and nerves. All this is enclosed in a covering of peritoneum, lying between the layers of the broad ligament.

The anterior ligament (vesico-uterine) is reflected upon the bladder from the anterior surface of the uterus. This ligament leaves the uterus at the junction of the supravaginal cervix and uterine body. The posterior ligament (recto-uterine) passes from the posterior walls of the uterus over the upper fourth of the vagina, to the rectum and sacrum. This ligament forms the pouch of Douglas, and, therefore, is intermingled with much peritoneum.

The two lateral ligaments (broad ligaments) pass from the sides of the uterus to the lateral walls of the pelvis. By these ligaments (septum) each side of the pelvis is divided into two cavities, anteroposteriorly. These ligaments chiefly concern this paper and are a field for much discussion. Anterior to these we find the bladder, urethra and vagina, while posteriorly we have the rectum.

Each broad ligament is composed of two layers. Between these layers we find the Fallopian tubes uppermost, the round ligament, the ovary and its ligament, the parovarium or organ of Rosenmüller, connective tissue and involuntary muscle fiber. The peritoneum comprising this ligament is thicker than in other portions of the abdominal and pelvic cavity, and is composed of a lower type of columnar epithelium.

The sacro-uterine ligaments pass from the second and third divisions of the sacrum to a point on the posterior wall of the uterus, just opposite to the internal os.

The uterus receives its blood supply from the uterine (a branch of the internal iliac) below, and the ovarian (direct from the aorta) above. These vessels penetrate the substance of the uterus, become very tortuous, and are very frequent in anastomoses. These large and important vessels meet each other and then branch away very minutely. The veins correspond with the arteries, and are very large.

The lymphatics of the fundus uteri terminate in the lumbar glands, while those of the cervix drain into the pelvic glands. The nerve supply is not important to the discussion.

Importance of Anatomy When Performing Hysterectomy.

Every part of the body calls for a thorough anatomical consideration when dealt with surgically. Possibly when performing a hysterectomy, this is fully as true as when dealing with any other portion of our body. So many important structures find lodgment in the pelvic cavity, as this cavity is an alley-way for the passage of blood vessels and nerves to the lower limbs.

The pelvic cavity, lined and padded with muscle, cartilage and fibrous tissue, is well prepared to render assistance to the organs therein. By this fine net-like formation, much jar is eliminated during the general work of everyday life. In the event of a weakening of the supporting uterine ligaments and elevating muscles, the pelvic cushion is ever ready to reduce the danger possibly resulting from sudden jars and continued pressure.

When performing hysterectomy it is seldom wise to remove the cervix uteri entire. Should the cervix be entirely removed we have left an inverted arch formed by the pelvic floor. This inverted arch needs most support at its central point of pressure; namely, the circular hole left after the cervix has been cut away. If this peg, so to speak, is not left, much sagging will be noticed at the vaginal zenith. This sagging is entirely uncalled for, and very detrimental to the future welfare of the supporting muscles and fibrous tissue.

On the other hand, when a small portion of the cervix, that inferior to the vaginal roof junction, is left, we have retained a plug which preserves the contiguity of important structures present about this area.

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After the ovaries, tubes and fundus uteri with the upper third of the cervix, have been removed, the uterine and ovarian vessels on each side should be carefully ligated with No. 3 chromic catgut. Each of these ties should be carefully anchored by dipping a needle through an island of fibrous tissue, after the ligature has been securely tied. This anchoring prevents any possibility of slipping at some later date. The ligatures thus placed, four in number, should be left with fairly long free ends, to be secured by a hemostat. Thus it is seen that we have four well placed and anchored ligatures, each carefully secured with the long ends in the mouth of the forceps.

The internal surface of the stump of the cervix should be carefully toileted and closed with a figure of eight suture of No. 2 chromic catgut. At this time, if the field of operation be carefully dried, the four raw edges of the broad ligament peritoneum will be seen limiting a wide gaping area. The floor and walls of this gap are made up of the cervix stump, in the centre below, and fibrous tissue and involuntary muscle fibres of the intra-peritoneal broad ligament stumps laterally. These lateral segments will be seen to have retracted into the crevices of the gap, while the cervix stump remains well up in position. To overcome the lateral intra-peritoneal retraction is just the most objective point in this operation.

At this time the lower intra-peritoneal broad ligament ligatures should be grasped by their hemostatic anchors, one on each side. The anchors should be removed and the ligatures very carefully tied, drawing the raw intra-peritoneal fibro-muscular structures in apposition. If the co-operative parts be carefully watched during this procedure, it will be noted that the retracting structures immediately come into view, and the lower half returns to a normal state of tonicity. After the ligatures have thus been securely tied, the field is gently sponged to give a clear view. If all is well the free ends of this tie are cut.

The upper two ligatures are then cared for in the same manner, great caution being executed when tying the free ends. Before cutting these free ends, the field should again be gently sponged to discover if all is in good apposition. The same phenomena is noted; namely, the retracted intra-peritoneal stumps come into plain view, and the co-operative tissues take on a state of well being—tonicity.

After the raw stumps have been treated thus, the free edges of the broad ligament peritoneum are sutured together with No. 2 chromic catgut. This peritoneum should be sutured in such a manner as to give the best possible support to the underlying structures and adjacent organs. To attain this result, the extreme posterior and anterior corners should each be sutured toward the other for a distance of about two inches. Then there will be a fair-sized transverse gap, which should be sutured laterally. Thus, when the broad ligament peritoneum is completely closed, the suture lines will intersect one another, forming a cross, with the short arm running from the posterior surface of the bladder to the anterior surface of the rectum.

The field should again be carefully sponged to note if all points are dry and do not ooze. By close inspection it will be seen that this line of closure of the broad ligament peritoneum causes this peritoneum to be brought into tension. By such tension the bladder is held up in place without any wrinkles or crevices to be seen on its surface. Thus we eliminate the possibility of cystitis developing as the result of disintegration of urine in these bladder folds. This is not a point of any minor importance.

It will also be noted that the rectum is aided by a fair suspension from this portion of the visceral peritoneum. A very important factor following all pelvic operations is to retain the rectum in as nearly a normal position as possible, and to see that this part of the alimentary tract continues in normal relation with its neighboring structure, the sigmoid flexure. To attain this result the sacral curve, which the rectum follows, must be retained as well as the angle it normally assumes with the sigmoid, as the latter dips down into the hollow of the pelvis and internal pelvic brim on the left. By the use of this intersection cross-stitching, when sewing up the broad ligament, these relations are well retained.

The relations of the rectum, sigmoid and bladder should always be carefully looked after. No pressure should be allowed to be brought upon the two former, or any wrinkling to take place in the latter. A

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wrinkled bladder can be the seat of much annoyance during a convalescence which would otherwise be normal in progress. Few things will be found more discouraging to the patient than a troublesome bladder. We should always endeavor to seek the most comfort for our patients.

If no pressure be allowed to be exerted upon the sigmoid or rectum, we at once overcome a most conspicuous cause for constipation. To maintain health we must have regularity of bowel action. If the technique above described be carefully carried out, the bladder, sigmoid and rectum are held up in good position.

Another very important factor is the maintenance of pelvic muscular tonicity. This is accomplished in two ways, namely; 1. By aiding those muscles that are already tired out by a continued dragging; 2. By shortening those muscles which have become stretched by too long continued exertion. Both of these conditions can be remedied by this operative technique.

By allowing the raw stump surfaces of the intra-peritoneal portions of the broad ligament to heal firmly in apposition we at once relieve the pelvic and perineal muscles of a great amount of extra work. The levator ani with its two divisions, namely: 1. The pubococcygeus, and 2. The iliococcygeus, is allowed to give free function. Thus the superior and lateral vaginal walls, the rectum and lower portions of the bladder are retained in normal position. In the same way the coccygeus muscle is given the liberty to exert, unhampered, its normal functional influence upon the superior-posterior limits of the rectum. Likewise the transversus perinei superficialis, the ischiocavernosus and the bulbocavernosus muscles are indirectly left to functionate normally. The sphincter and externus does not become tired out by indirect pressure because the bowel contents are pushed forward and downward by unnatural causes. The intersecting stitches used to close the peritoneal covering of the broad ligament render no small amount of assistance in accomplishing the above results.

Conclusions.

By carrying out the above technique in treating the broad ligament stumps, following a hysterectomy, the following important items are a result.

1. Tonicity of pelvic and perineal muscles is either returned to or maintained normal. The striped muscle fibres are allowed to regenerate very rapidly.

2. All undue pressure is removed from the blood vessels supplying the lower limbs.

3. Nerve pressure, a very important factor, is prevented.

4. The formation of stubborn, invalid-producing adhesions is prevented at the site of peritoneal closure.

5. Wrinkling cystitis is avoided.

6. The erectum and sigmoid flexure are allowed to lie in their normal bed.

7. Post-operative hemorrhage is nil.

8. Normal functional activity of the alimentary tract is continued unhampered.

9. Lymphatic distribution remains normal.

10. Convalescence is shortened, and the patient is socially active at a somewhat earlier date.

967 Elm Street.

Report of a Case of Coal-Gas Asphyxiation.

By J. E. Fopeano, M.D.,
Hoboken, N. J.

Cases of coal-gas asphyxiation in the *aggregate* are sufficiently frequent, but to the *individual* practitioner, they are of sufficiently rare occurrence to make them of intense interest, since there is no specific remedy or measure which may be employed to help the victim regain the grasp on life to which he clings by a mere thread.

On March 17th, at 8.00 a. m., I was called in haste to a man who "had taken gas." On arriving at the house, I found the patient lying on a couch in a kitchen, uncovered, before an open window, surrounded by men and women, mostly friends.

Some were there out of curiosity. One man was attempting to pour warm coffee down the patient's throat—a feat quite out of the question just then.

The following history was obtained: Mr. J. M., about 28 years, a grocer clerk, of sober, regular habits, repaired to his room at 10.30 the previous evening. The room is one of the hall variety, about 7 feet by 10 feet, with one window, which was closed, doubtlessly. A gas pipe protruded from the wall 5 feet from the floor. This tube was mounted with a tip at the exit from the

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partition, and by a hose was connected to a gas heater on the floor, which he used to heat his room before retiring.

On the morning in question he failed to arise at the usual time. Some member of the family of whom he rented the room, on investigating, found his door locked and heard him snoring loudly inside. The strong odor of gas aroused the suspicion of what had happened. On opening the door, the patient was found lying on his bed, with head hanging down to the floor—a position which no doubt spared his life. The faucet feeding the heater was closed, but that feeding the upper jet was open. He was removed to the couch where I found him.

The couch was in front of an open window. The room was intensely cold. The patient was in a profound coma, eyes partly open. Respiration stertorous, with short inspiratory and forcible expiratory acts. The pulse was almost imperceptible, the skin livid, the body stiff and cold as marble. "Here was a *condition* and not a theory," and was to be met, and promptly, to be of any service.

To revive the fluttering heart 1-30 grain of strych. sulph. with 1-100 grain of nitroglycerin were injected hypodermatically.

To restore body heat friction of the skin was instituted, but with no apparent benefit. Several of the bystanders were mustered into service, but after the most vigorous and exhausting seance of rubbing, that skin was cold as marble still. There was no reaction, no heat.

Bottles filled with hot water, and hot bricks were then packed around the body, feet and legs, under heavy blankets.

While these measures were being carried out, aqua ammonia on a napkin was held to his nose, with a view of stimulating his heart and arousing him to consciousness. But like the other measures, this seemed to have but little effect, if any.

It was now nearly an hour after treatment had been instituted, and the patient's condition was pretty much the same, and the bystanders were getting anxious over the slowness with which we were succeeding in reviving him.

The patient was now seized with a tonic spasm of the muscles of the chest and arms. His arms were flexed over his chest and as rigid as a bar of iron. His respiratory acts were violent, as if he would burst asunder at every act. To relax this spasm 1/8 grain morphine and 1-100 grain of hyoscin hydrobromate were injected hypodermatically, though the condition of his respiration did not warrant such drugs.

After a half-hour the spasms began to abate, and gradually his respiration assumed the character of a more restful sleep. The body surface was becoming warm, the pulse full, strong, but rapid.

The nose began to show signs of the patient's returning consciousness, as he would turn his head away when ammonia was presented to his nose.

In this procedure I persisted, for it now seemed to irritate him and tend to revive him. The spasm was now relaxed and the patient lay thrashing about considerably, though still unconscious.

About two hours of exertion had not yet rewarded us with much success.

At this point Dr. M. Granelli arrived to lend his assistance. He at once suggested oxygen, to which suggestion I acceded, and he went out to procure it. While waiting his return the ammonia was again presented to the patient's nose, when with a sudden start he arose to a sitting posture on the couch, opened his eyes and stared about as if in wonderment at what all this crowd was about.

He spoke not, nor did he seem to recognize his friends about him. He lay down in half a minute, and lapsed into semi-consciousness again.

On the arrival of the doctor and oxygen, it was adminstered at once, but he fought against it most obstinately, so that it required four men to hold him while the nozzle was held to his nose.

He did not seem to inhale it, and after several minutes' trial we desisted. The general condition had much improved by this time, so Doctor Granelli departed, leaving the writer in charge.

Patient had now become warm all over his body, the heart was bounding and he was perspiring and consciousness was returning, so he could no longer endure the pungent odor of ammonia. He soon was so far improved that he was coaxed to drink half a cup of coffee with brandy, and repeated the dose in a short time.

Attempts were made to have him inhale oxygen, but he always resisted.

At the end of three hours or 11.00 a. m., he was completely restored, was wide awake. He seemed to recognize the faces about him and to comprehend the situation, and even answered questions regarding his feelings.

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He was now removed to his own bedroom, which had been meanwhile prepared, and was left in charge of a trained nurse, with instructions to give him oxygen if she could persuade him to take it, and give him a heart stimulant which was prescribed.

He was seen at 3.00 p. m. when he was feeling well except for some pains in his back and headache. He then had regained his consciousness and stated that he had no knowledge of all that transpired during the night and morning hours. Even when he was placed in bed he said he did not comprehend what we were about.

At 9.00 p. m. he was again seen, the nurse reporting that he had taken nourishment, emptied bladder and bowels.

I feared pneumonia would develop after all the exposure he had been subjected to, and the stagnation of his circulation.

He was seen at 9.00 a. m. on March 18. Nurse reported he had slept all night. Temperature normal, pulse 100. Had eaten breakfast and felt like going to work.

The treatment here outlined is not given as being scientific nor *the* treatment to be pursued in such cases. It is given as the treatment employed in this case, with, I submit, gratifying result.

He had respired a gas-charged atmosphere from 10.30 p. m. until 7.30 a. m. next morning, in a room 7 feet by 10 feet, and ceiling 9 feet high, with closed window.

The leaking stop-cock was 5 feet from the floor on which his head rested, while his lower body and feet were on the bed.

On the 19th he resumed his work none the worse for the Kattsenjammer through which he had passed.

Other cases which the writer has seen required the employment of artificial respiration, but not in this. Whether it was that this case was not so profoundly narcotized as the others I cannot say, but I can assert that in no case I had seen before were the temperature and circulation so profoundly affected as in this case, even where the respiration was almost nil.

I do not consider that the oxygen consumed in this case played any important part in the result, for he already had reacted well before its employment, and he took it very badly, as already observed.

I hope others will relate their experience and management of such cases.

511 Garden Street.

The Detail Man as Seen by the Physician.*-

By J. O. Arnold, M.D.,
Philadelphia.

Mr. President and Gentlemen:

I am not in the habit of offering apologies, but some sort of explanation is in order, before inflicting upon you these "broken and dissevered fragments" of what was intended to be a paper. If what I shall have to say under the subject that has been assigned to me is woefully lacking in continuity of thought and contiguity of kindred ideas, or if, in your opinion, it is entirely destitute of anything that looks like a thought, or an idea, I want to say to you right now, that it is due to reasons that I would not feel safe in mentioning here to-night. Chief among these is the fact that, since I began the preparation of this paper, I have been interrupted, diverted, disgusted and delighted by just fourteen detail men. These fourteen men, one of whom was a female of the opposite sex, have put at least fourteen different kinds of ideas into my head and fired my imagination in fourteen different departments (to say nothing of the damage done by smoke and water and "hot air"), and the resulting debris is what you will be obliged to endure for the next fourteen minutes. You will understand, therefore, that I am wholly irresponsible for anything I have written—or failed to write—and you may also be able, from the hint here given, to rightly place the blame for my condition of hopeless irresponsibility.

I have been asked to speak of the "detail man," as seen by the physician. The term "detail man," I am told, is to include all that more or less indefinable and irrepressible tribe of time-consumers who infest our offices from day to day in their efforts to make a living at our expense, but is to be especially applied to-night to those valiant and vigorous purveyors of potent pills and palatable potions known as "drug men," and the gentlemanly and garrulous representatives of the instrument and publishing houses.

This gives us a motley crowd, and I use the word "crowd" advisedly. From my own experience, but more particularly from data gathered from my brother practition-

*Read before The Philadelphia Clinical Association, on "Commercial Exhibit Night," April 3, 1911.

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ers, I am convinced that the number of men calling upon the doctors of Philadelphia to-day, in the above-named capacities, is fast assuming the proportions of a crowd, and like all crowds that congregate where they are not needed, this crowd is becoming more or less of a nuisance. It is for this reason, perhaps, that the subject is before us for discussion to-night. Just why I was selected as one of the victims to present this subject, and thus to be innocently sacrificed to satiate the maw of this crowd, is more than I can tell. I assure you I approach my task in fear and trembling, and I hasten at the outset to say to the detail men here to-night, that I am not a volunteer soldier, and at this very moment would gladly take to the tall timber rather than face the fire I fear we shall evoke from your most honorable ranks. Deal gently with us, therefore, gentlemen, you "detail men" who are here to-night, and pass the word along to your tribe at large, so that in the future we may not be compelled to fight single-handed and alone the righteous wrath of the "detail man," whose name is legion (though sometimes designated by a more devilish appellation). A description of the several different "detail men" who have had a part in making this paper what it is, or rather, I should say, what it is not, by breaking in upon and appropriating the spare time that I might otherwise have used in writing a *good* paper, would make an interesting performance in itself, but it would be an awfully long one, and for this, and other reasons who are here to-night, I must reluctantly refrain from indulging in any such pleasant pastime until some more propitious occasion.

If I did have the moral and physical courage to say anything along this line, however, I think I would take the whole bunch of "detail men" as they have appeared in my office, one after another for the past three or four weeks, throw them all in together (perhaps it would be best to leave out the woman); mix them and mold them into one composite specimen of the "genus homo detailia masculinis," and then enumerate to you some of his more salient characteristics. For instance, such a man would appear in your office on an average of twice a week the year round, and by actual count he would consume, on an average, twenty minutes of your time at each visit. Like death, he would have all seasons for his own. He would come in the daytime and he would come at night; he would come when you are in, and he would come when you are out (and camp in your waiting room till you return); he would hound your footsteps in the streets, lay for you at the front door and ambush you in your attempt to escape at the back gate. Scripturally speaking, he would be "instant in season and out of season," omnipotent, omniscient, omnivorous, omniparous, omnipresent and all-fired hard to get clear of. You would admire him, hate him, love him, fear him, pity him and patronize him. He would be as wise as a serpent, as harmless as a dove and as full of guile as a green goods man at a country fair. He would greet you with a smile like a garden of roses, and a handshake that would lift you from the deepest slough of despair. He would have the politeness of a Chesterfield and the persistence of the devil himself. He would be the archangel of modesty and the brazen image of impudence—the double distilled spirit of meekness and the compound quintessence of gall—the disseminator of all wisdom and the distributor of much professional gossip—a veritable god of humility and a very trying goad to humanity—the buttermilk of human kindness, and the big potatoes of bluff and bluster—the most flagrant of flatterers, the most consummate of liars, and the "ne plus ultra" of the scholarly gentleman.

Such in brief would be a description of the composite detail man, that would come from the crucible of my experience in the past four weeks, if I were to present him to you, but I shall continue to refrain. I know that you detail men here to-night will fully understand me when I say that I do not *say* what I have just *said*. I only say that these are some of the things I *would* say, if I *did* say anything in an attempt to voice the sentiments of many physicians who are not present to-night. Of course, you can see for yourselves that those of us who are present are your friends and would be far from saying anything that might be misconstrued into a reflection upon your profession.

Among the many factors influencing the practice of medicine of the present day, the "detail man" is by no means the least important. Whether we wish to admit it or not, it is a demonstrable truth that the various enterprising pharmaceutical houses of the country, through their literature and

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representatives, are exerting a far wider and more subtle influence over the therapeutic treatment of disease to-day than all the medical schools of the land. I realize that this is a rather sweeping statement, but it is one the truth of which, I think, is so evident that I scarcely need stop to support it with any extensive argument. A moment's reflection will enable you to recall a dozen ways in which the modern pharmaceutical and manufacturing houses are gradually making themselves masters of the situation. They are backed by ample resources; they are equipped with the most modern facilities; they employ the most expert chemists, bacteriologists and pharmacologists. They do research work and are constantly inventing, devising and testing and working out the hundred and one different problems that these later days are bringing up in medicine and surgery, and thus doing a necessary and most important work that the physicians themselves cannot do and that is not as yet properly provided for in the medical schools or other rightly constituted establishments.

'Tis true these houses are actuated in all this work by purely commercial motives, but in no other way could we expect the investment of private capital in sufficient quantity to build up and carry on such work. This fact only emphasizes one of the weak places in the governmental relations of the medical profession and its facilities for serving the public. Our State and National Governments have been very slow to do anything along this line for the welfare of their citizens. Here and there a Rockefeller or a Carnegie has done something to atone for the sins of governmental omission, but for the most part such work has thus far been left in the hands of private enterprise, to be carried on for purposes of private gain. No one will deny that great good has come in this way, as well as great harm—much that has been of inestimable value to the medical profession—and herein lies one of the chief dangers in the whole system. We have come to rely too much upon the honesty and integrity of the manufacturers; we have given over to them more and more of the work we ought to do ourselves, or demand, that our local pharmacists do, and the result has been that much harm, as well as much good has been done by the system we have been so largely instrumental in building up.

Through the endless repetition of manufacturing houses all over the country, each striving in sharp competition for financial success, abuses are bound to creep in, and the trusting and busy physician (and through him the public at large) is sure to suffer from these abuses. The dangers are all the greater because they arise in sources that have produced so much that is good. There is here, as in all other activities of life, a dangerous borderline between great good and great harm. It is an easy scale, for instance, from strictly ethical and meritorious preparations of pharmaceuticals to proprietary remedies of very questionable character, and from that to patent medicines of no character at all. Between the two extremes the distance is small, and commercial success is practically all that separates them.

As physicians, we know that many drugs and combinations of drugs are offered to us in much more elegant, pleasant and effective forms by our well-equipped manufacturing pharmacists than we can obtain in any other way, and we are, therefore, prone to accept their products. But we also know that our confidence in the honesty of the manufacturers is often greatly abused and we have no adequate means of protecting ourselves against this abuse. Lately we have done something for self-protection in our "Council on Pharmacy and Chemistry," but this can do so little in a field that is so large that the average general practitioner is left almost wholly without protection, a legitimate prey for every commercial pharmacist in the land whose shrewdly trained detail man can gain admission to his office.

To quote from a recent magazine article by a well-known chemist, "Aside from the work of the Council on Pharmacy and Chemistry, what chance has the ordinary general practitioner of learning the truth about the many preparations that are offered to him to-day? Really none at all. It is the simple truth, and in no sense a reflection on him, to say that he lacks the knowledge, the training, the time and the means for testing the real value of the numerous substances which are pressed upon his notice by clever salesmen." There is the point, "Clever salesman"! Salesmanship, in these later days, is becoming a fine art, and the detail man is a skilled artisan, while we physicians constitute the crude material upon which he works to build up the superstructure of financial success for

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his enterprising employer. Does the figure overstate the case? I do not think so. Every doctor in Philadelphia to-day is looked upon by the detail man as so much available material to be reached, studied, moulded and shaped into that which will best serve the purpose of the particular artisan who is "on the job."

Again, let me remind you of the rapidly growing competition among manufacturers of physicians' supplies, books, drugs and instruments. These "goods" must be sold. Physicians are the buyers. The supply far exceeds the demand. This makes more and more difficult the work of distribution. Salesmen must be found of such ability that they can meet these increasing difficulties. There was a time, perhaps, when representatives of the various houses, plain, ordinary non-professional men of mediocre ability, visited physicians to take their orders for supplies. Now, professional salesmen of the highest type of educational and business qualifications call upon the doctor, not merely to *take orders,* but to *sell goods; not* to find a possible customer here and there, but to *make customers everywhere.* It is *one* thing to *find* a demand and *supply* it, it is *another,* and a very *different* thing to *create* a demand for supplies already made. Hence a very much stronger and more clever class of detail men are in the business to-day than formerly, and this means that physicians are far more effectively influenced and controlled by the manufacturers now than formerly.

Let me further substantiate the truth of my position by evidence directly from the detail man himself. I have had the good fortune lately to have had some very kind gentlemen in my office (one will meet them occasionally, you know, even among detail men), who were willing to be "interviewed" concerning their work among physicians, and some of the things these gentlemen told me are worth repeating and will serve to emphasize my contention.

One man showed me a series of letters he had received from a well-known New York tablet manufacturing company when a candidate for a position in their employ. They were his confidential instructions as to how to meet the various types of doctors, how to get into the doctors' offices to get a "hearing" when hearings were not "on tap," how to so present his goods that the uninterested physician would "sit up and take notice," how to so glibly and insidiously talk all the superior virtues into a given formula or concoction that, e'er he was aware, the spellbound victim would give his order for Blank & Company's Nerve Stimulant No. 5. You drug men know how such instructions run. I need not go further into detail. The letters were strictly confidential anyhow, and I wouldn't want to quote from them; but the point I wish to make is this, that in all these long letters, and there were several of them, page after page was filled with this one idea: "Sell Blank & Company's tablets or your name is mud." Sell them honestly if you can, but *sell* them. Sell them to doctors who need them, if you can find enough doctors of that kind; if not, "educate" the doctors into *knowing what they need.* In other words, "get business for Blank & Company, or get out." "Find a buyer, or make one, or you are no good to us." "Our goods *can be sold.*" "We *must* increase our business in your territory. The doctors of Philadelphia are no harder to work than those of other parts of the country where our business is growing rapidly. If you prove to be a good 'business getter' your salary will be advanced accordingly; if you do not, we do not want you at any price," etc.

There was not a word in all those letters to suggest that their authors ever for a moment entertained the shadow of a thought concerning the welfare of the sick and afflicted humanity who were supposed to consume their "goods." There was not a line of instruction to this prospective "business getter" that was calculated to suggest to him that his work might ever possibly be of any benefit to the doctor or to the doctor's patients. It was purely a cold matter of business—increase the finances of that firm or fail to secure the job. What was our candidate to do? He wanted a position. "He needed the money." But he had a conscience (he had never been a detail man). He knew that to succeed he must have the ability and the unscrupulous willingness to make doctors buy and use preparations and combinations of drugs with which they were not familiar and against which their better judgment rebelled. These qualifications my friend didn't believe he had, and he is not selling "goods" for Blank & Company to-day.

A very successful pharmaceutical manufacturer once made this significant remark to me concerning the relations of the doc-

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tors to his business. "We look upon the doctors as a sort of non-salaried partners in our business. They constitute our distributing agents, through whom we get our goods into the hands of the consumers, and they are the most active members of the firm, but we don't have to pay them anything. All we do is to send our supply men around at regular intervals and keep them stocked up." This same man, when I pressed him for his candid opinion of that method of practicing medicine which makes his business a success, made a reply that ought to set some of us thinking: "What do I think of it? I just think this much of it: if I went to a doctor to be treated and he handed out to me a ready made remedy, such as the various tablet combinations, I wouldn't go back to that doctor for treatment." Such is the testimony of a man who has "inside information" on tablets, and who is not unacquainted with doctors.

Do you believe the drug and book and instrument salesmen are not potent factors in the everyday practice of medicine? Listen to this: One of the most successful business getters in the city of Philadelphia told me a few days ago that it is not an uncommon experience with him to have a young physician send for him and say, "Mr. Blank, Dr. So-and-so recommended you. I have fifty dollars to spend for medicines and I want you to stock me up to that extent on what you think I ought to have." Of course, our obliging drug friend can soon fill an order like that. Nothing could be easier. And why shouldn't he know better than an inexperienced physician just what diseases will be met with in the next six months in any given locality and exactly how they should be treated? It is no trouble for a doctor like that to get a start. All that is necessary is for the drug man to supply the goods, plainly and properly labeled. The patient usually makes his own diagnosis, and it's a poor doctor who can't do the rest.

I did not have an opportunity to interview one of you book or instrument men lately, but I have no doubt you could duplicate this testimony in your respective lines. As physicians we may not always say in so many words that we want a hundred dollars' worth of books or instruments of your selection, but it practically amounts to that in the majority of cases when you get hold of us. As a rule, you know a great deal more about how much we ought to spend for books and apparatus than we do, and no one will question your superior knowledge as to what we need. When that "peripatetic, ubiquitous disseminator of intellectual pabulum and bookologist" whom we all call Trust comes into my office I simply surrender at once and buy the book he knows I need, for if I don't I know that it will only take him about ten minutes to talk me deaf, dumb and blind, and then he would sell me three books instead of one, on the plea that I should study up my own afflictions.

But I have already overrun my allotted time. I must hastily conclude by saying that, whether the detail man be good or bad, whether a help or a hindrance to the work of the doctor, he, *himself*, is not to blame. He is the natural outcome of conditions for which the medical profession is largely, if not entirely, responsible, and any correction of faults in existing conditions must be brought about by and through our own professsion. If we could but somewhat more effectively restrict the number and frequency of the visits of the detail man, most of us could manage to get along pretty well with him. We might even be glad to see him once in a while, for, in the words of the immortal David Harum, "A reasonable amount of fleas is good for a dog."

2503 N. 18th St.

Vaccination in a Better Way Asked.

By E. L. Paulding, M.D.,
Arroyo Grande, Cal.

Several things in the line of vaccination have come to me of late years, and I believe have come to thoughtful minds everywhere, but as yet I have not seen these thoughts expressed either in book, or in journal, but perhaps you have. I don't take all the medical journals, nor get time to read all that I get.

First of all I want to state that I am not an anti-vaccinationist, except in rational lines. I believe that Jenner gave the best gift to man, next to the gift of the Christ, that man ever received. Before his time millions died of this loathsome disease; a disease that is worse in its virulency than any that were ever inoculated by vaccination. Now very few die of variola, and still fewer die or suffer

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from syphilis, tuberculosis, or any skin disease, inoculated into the child by some barber or unlearned and careless physician, who was inoculating against smallpox. If a responsible make of virus is used, and a reasonably clean man inoculates it, there are no infections, other than the cowpox, ever introduced by it. This cowpox virus is usually a complete guard against variola for life if it takes. However, smallpox itself repeats itself now and then. One of the Louises of France had the disease when a boy of fifteen, and at the age of sixty-five got it again and died. Just so vaccination should be repeated every few years as a guard.

The use of the word "virus" should be thrown out, and another less offensive term used. Maybe it is this term that is raising up such a lot of antis. No, it is not all that is raising them, but I will tell you one big thing that has raised up an army of them.

A very few years ago we had the experience of having the very mildest results follow vaccination. The arms or the legs did not get very sore, the temperature seldom went above 100 degrees. The manufacturers got the credit of introducing perfectly pure aseptic virus, that had no streptoccoci nor any other foreign, ugly sore-producing and blood-poisoning bacteria or cocci in it; but now the virus seems as strong and fever-producing as it ever was. What is the reason of these changes?

I will tell you the secret of it. At the close of the Spanish War our returned soldiers brought home with them from Cuba or the Philippines a very mild form of variola. Many of them did not know that they had ever had a case of smallpox. They called it "Cuban Itch" or "Manilla Itch." Many physicians—not of our school—said it was not smallpox at all. But it had all the characteristics of the old kind. When it did become severe—you could hardly call it virulent—it was in some old drunk, or in some person run down by excesses of some kind. The makers of vaccine points used this mild form to inoculate their cows. This is why the pustule was so moderate in size and the temperature stood at normal or very slightly above. That is the secret of their "Aseptic virus."

At the beginning of the "Cuban Itch" epidemic in California we had none but the old virus (well named *virus*) of the old malignant form. I remember my boy, Fay, took the "Cuban Itch," and to head it off in my girl I vaccinated her. The boy's temperature never rose to 103 degrees. He had two or three dozen mild pustules that never left a scar. There were no complications. The girl's arm rose up in wrath at the insult offered it. The suffering was intense. The temperature rose above 105 degrees. Well, it went through the old prescribed run of three days of fever, three days a papule, and three days, and longer, a pustule, then convalescence; but deliver me from such a virus again. I'd take the chances with "Cuban Itch" once a year in preference. The man who gave it to the cow that grew that virus must have died—the cow, too.

Over in Fresno, Cal., when the "Cuban Itch" set in it was so mild that it was not known as variola, and the town was strongly infected with it before the health officers got onto it. They instituted compulsory vaccination at once to an extreme degree. They must have used some of the same make that nearly took Ruth's life. There were a lot of awful sore arms. Five deaths followed vaccinations. Not one followed the "Cuban Itch," though half the people had it. The disease spread all over the State. Everybody that had not been successfully vaccinated took it. I never heard of a death from it, though it always went through the typical threes—three days of fever, three days of papule, three days of vesicle, and three days of pustule, indented in every case just as in the old form. I only had one severe case. I never was scared about that. We only vaccinated about half a dozen cases. We had heard from Fresno.

We have never had an epidemic of smallpox in California since, even in the cities. The mild form was a guard just as effectual as vaccination against it, and much safer. The mild form has given immunity. I think that the same is true in the greater part of the United States.

I remember that in reading over the health reports in some journal during the first great epidemic of "Cuban Itch," the reports showed that the old virulent form was prevalent in some of the seaboard cities like New York, Boston and Philadelphia, for the mortality was quite high. In Chicago and Minneapolis the number of cases reported was much larger and

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the mortality nil or almost nil. It was easy to tell which city had the old form and which the new.

Now, what I am trying to get at is, why not import a few Cubans who have the improved form now and then, and thus spread it and give this grand old nation immunity against the old virulent form that comes from Europe?

At any rate, why does not the profession insist upon the makers of the virus (well named in its present form) going to Cuba or Manilla where the disease takes this mild form and producing their anti-variola serums there. No wonder that there are anti-vaccinationists when such virulent virus is used. Let the makers produce the mild form and the opposition will soon fade away. Then the time will come that the maker of the old form "virus" will have committed a punishable offense.

Recreation Necessary to Health.

By C. Kendrick, M.D.,
Kendrick, Miss.

In this fast, commercial, graft, and get-rich-quick age, the following editorial from the *Farmer's Voice* should be read and considered seriously by every hard workingman, no matter in what field he labors:

"A business friend of many years, talking with the writer about taking and making enjoyment along with one's regular work, said it was a serious mistake of his early business life that he did not combine more recreation with the great amount of hard work he did, just as so much drudgery. In recent years he had learned this lesson, and found a great deal of enjoyment in and with his business, which prospered more than ever. This idea is just as true and as good for the farmer as for the business man. We seriously wrong ourselves, and, moreover, diminish our strength and efficiency, when the whole thought and effort is centered continually on nothing but work, work, work."

Not only the business man and the farmer, but the active, working physician, may learn a good lesson from the above quotation. No man needs a recreation occasionally more than the busy doctor. In the physician both the mind and the body are continually on a strain. Every physician should take a day or a week off every now and then. A few days spent at his state medical association once a year is good as far as it goes, but this is not enough. Some medical friend can take charge of the bad cases while he is away from home, and those not so seriously ill will have a chance to get well. This is an old chestnut on the physician, but after all there is no little truth in it. Many patients will do well to rest a while from medicine. It is recreation to them.

The time was when a large majority of people thought sport and recreation of all kinds was time wasted, and we were taught that to waste time was almost a crime. Ben Franklin in his Poor Richard's Almanac, taught that almost all forms of recreation were time thrown away. In his day what he said was regarded by many as almost as true as Holy Writ. But there never was a greater mistake. Recreation may be carried too far, sport may take the place of necessary employment. We are taught in Holy Writ that "By the sweat of the face shall man eat bread." But this does not mean that man shall take no rest or recreation. The *Farmer's Voice* expresses my ideas so well that I have given the above quotation in full. Any up-to-date physician will agree with the editor of that paper on this subject. He will agree, also, that a certain amount of rest and recreation is necessary. Nothing in the world helps a tired, worn-out business man more than a few days' rest and recreation. A hunting or fishing trip, camping out and breathing nature's pure air, rests both mind and body, aids digestion and improves the appetite. After such a trip one can go to work with renewed energy and vigor. There is no doubt that life will be prolonged by such course, and rendered far more enjoyable. In addition to this, in nine cases out of ten there will be no time lost. The renewed energy and vigor following such a trip and such recreation will enable one to make up the lost time, if it may be called lost time. very shortly. Every child who has been given a task, and promised a pleasure trip when such task was done, will remember how easily the work was accomplished. Children who work on the farm will do more work and better work if given a few days outing every month. Let them understand that, after the cotton has been "gone over" the first time, there will be a day's fishing on the creek, and probably a night's camping by the stream. Nothing will make

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the labor so light and easy. Let them understand that when the cotton has been "picked over" the first time, they may have a day in the woods gathering grapes and nuts. Parents who have children large enough to work, try this plan all along the line. Keep account and see if there is not just as much work done as when they are kept busy all the time. The same plan should be tried with school children. There should be a day occasionally devoted to recreation and pleasure; besides, many valuable lessons could be taught by the teacher. There are many grown-up people who cannot name and point out more than eight or ten forest trees and give their names correctly. Much pleasure and many valuable lessons might result from a day spent in this way occasionally.

Children who work in factories in large cities should have a great deal of recreation of this kind. The strong arm of the law has taken charge of many matters pertaining to health and happiness. Just here is a place where the legislator in manufacturing states might find a fertile field for getting in his work. In some states child labor is prohibited. In states where it is not prohibited it should be regulated, and this feature should be part of the regulation. Indeed, it seems to me, if the managers of the factories themselves would adopt such plan as I have outlined for children working on the cotton plantations, they would gain rather than lose by it.

While passing along life's pathway there will be no loss of time if we pause occasionally and pluck the beautiful flowers.

Atropine Treatment in Tetanus.

Impressed by the results reported by the local government veterinarian from the use of large doses of belladonna with small doses of morphine in the treatment of tetanus, Dr. R. F. Secoresto, of Barbados (*The Lancet*, May 21, 1910), decided to try atropine and morphine in the same way. He reports two cases, both apparently promptly benefited and cured. The treatment consisted of atropine 1-300 grain, and morphine ⅛ grain, by the mouth. Every two hours for three doses, then every four hours in an adult, and less in a child (colored) only three years old. In addition to above, calomel and sodium sulphate were employed to keep open the bowels, and hot turpentine to dress the wound.

Treatment of Acute Dysentery.

EDITOR MEDICAL COUNCIL:

Permit me to say a few words to the paper of Dr. Samuel Floersheim under this heading, which appeared in the May issue of your excellent journal.

Bier, in his book on "Hyperemia as a Therapeutic Measure," says: "Is it not a remarkable thing that, since my first publication in 1894, it has taken fully nine years before so simple a remedy, strongly recommended by me again and again, has been subjected to a test?" How much I sympathize with him. It was in the year 1883 that I observed, and described in one of our best scientific journals, "The Annals of Anatomy and Surgery," the specific effect of carbonic acid gas inflation of the rectum in all kinds of dysentery, and ever since I have again and again in many medical journals called attention to this physiological and rational remedy, and still I am disappointed when reading articles like this one of Doctor Floersheim, in which the remedy I have suggested is not even mentioned. The only explanation to be found for Bier's experience, and, if I dare say so, to a limited extent, my own, has been given by Carlyle: "The popular man and the man of true originality are seldom one and the same individual. Reasons are obvious enough. The popular men stand on our own level, or not more than a hair's breadth higher; he shows us the truth which we can see without shifting our present intellectual position. This is convenient. The original man, on the other hand, stands above us; he wishes to wrench us from our fixtures, and to elevate us to a higher and clearer level. But to quit our old fixtures, especially if we have sat in them with comfort for a long time, is no such easy business; accordingly, we demur, we resist, we even give battle, and while we may suspect that he is above us, we try to persuade ourselves (laziness and vanity earnestly asserting) that he is below us." (As a matter of course this does not refer to my own particular case, since I cannot claim any superiority whatever, but the fact is that an idea of mine, a practical, valuable observation, has been treated with indolence. with silence). "But now let a speaker of the other class come forward—one of those men that have the opinion which

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all men have. No sooner does he speak than all of us feel as if we had been wishing to speak that very thing, as if we ourselves might have spoken it; and forthwith resounds from the whole world a celebration of that surprising feat. What clearness, brilliancy, justness, penetration! Who can doubt that this man is right, when so many thousand votes are ready to back him? Doubtless he is right, doubtless he is a clever man, and his praise will long be in all the magazines." Carlyle, if he had studied misocainia in medicine, that is the hatred of new ideas, could have furnished interesting examples.

Doctor Floersheim has very superficially referred to the etiological factor, the bacteria, but not at all to the climatological cause. It is true the paper treats only on therapy, but even so a little more reference to etiology should have been made. The author has apparently not been in the field when the whole army becomes suddenly afflicted with dysentery; at least he does not mention such appearance of dysentery. I may be permitted to recapitulate here such a condition, which, besides presenting the features of dysentery in the field, is of historical interest. In the beginning of May, 1812, the great army of Napoleon arrived at the frontier of Poland, whence it proceeded by forced and most tiresome marches to the river Niemen, which forms the boundary between Lithuania and Poland, arriving at the borders of the river in the middle of June. An immense body of soldiers (500,000) met near the city of Korono, crossed the Niemen on pontoons, and formed, under the eyes of the Emperor, in endless battle line on the other side. The forced march continued day and night over the sandy soil of Poland. The tropical heat during the day and the low temperature at night, the frequent rainstorms from the north, the camping on bare and often wet ground, the ever-increasing want of pure water and fresh provisions, the immense masses of dust, which, cloudlike, hung over the marching columns—all these difficulties together had sapped the strength of the soldiers even in the beginning of the campaign. Many were taken sick before they reached the Niemen. The march through Lithuania was hastened as much as the march through Poland. Provisions became scarcer all the time, meat from cattle that had suffered from starvation and exhaustion was for a long time the soldiers' only food. The great heat, and the inhalation of sand and dust, dried the tissues of the body, and the thirsty soldiers longed in vain for a drink of water. Often there was no other opportunity to quench the thirst than that afforded by the swamps. The officers were powerless to prevent the soldiers from kneeling down at the stagnant pools and drinking the foul water without stint. Thus, the army, tired to the utmost from overexertion and privation, and disposed to sickness, entered the land of the enemy. The forced marches were continued during the day, through sand and dust, until stormy weather set in with rain, followed by cold winds. With the appearance of bad weather, dysentery, which had already been observed at the time of the crossing of the Niemen, showed itself with greater severity. The route the army had taken from camp to camp was marked by offensive evacuations. The number of the sick became so great that they could not all be attended to, and medical treatment became illusory when the supply of medicaments was exhausted. The greater part of the army fought in vain, however courageously, against the extending evil. As everything was wanting of which the sick were in need, there was no barrier against the spread of the disease, while at the same time the privations and hardships which had caused it continued and reached their climax. Some of these soldiers would march, equipped with knapsack and arms, apparently in good spirits, but suddenly would succumb and die. Others, especially those of strong constitution, would become melancholic and commit suicide. The number of deaths increased from day to day. Marvelous was the effect of emotion on the disease. Surgeon-General von Kohlreuter, during and after the battle of Smolensk, witnessed this influence. Of four thousand Wuerttembergians who took part in that battle, there were few quite free from dysentery. Tired and depressed, the army dragged along; but as soon as the soldiers heard the cannon in the distance, telling them the battle was beginning, they emerged at once from their lethargy; the expression of their faces, which had been one of sadness, changed to one of joy and hilarity. Joyfully and with great bravery they went into action. During the four days

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that the battle lasted, and for some days afterward, dysentery disappeared as if banished by magic power. When the battle was over and privations were the same as before, the disease returned with the same severity as before—nay, even worse, and the soldiers fell into complete lethargy.

Carbonic acid gas, besides stimulating capillary circulation, has an anesthetizing influence, and this is especially remarkable when the gas is applied to painful ulcers or inflamed mucous membranes. On account of these two qualities, the stimulating and the anesthetizing, it is indeed an ideal remedy in dysentery. In my book "Carbonic Acid in Medicine," I have given a minute description of how I came to try this means in the treatment of dysentery and how I used it with surprising satisfaction ever since the year 1883.

Bier, in his complaint which is mentioned in the introduction of this article, says: "But the thing seems characteristic to me of the modern tendency for fashions in medicine. Simple and logical remedies are ignored, but such produced according to the rules of 'science' in laboratories or factories are incredibly overestimated and disseminated. How much excitement would it have created if some serum for injection or some chemical preparation, thrown on the market with some attractive name, could have achieved similar results."

And indeed our great men of science, instead of listening to my claims for carbonic acid, have filled our great journals with reports of their experiments to discover a new serum treatment of dysentery —carbonic acid treatment in their opinion is not scientific, because there are no so-called exact methods, no complicated laboratory investigations required to prove its efficiency. Our great men of science look with disdain on a method which is so simple that the man who is not trained in the new scientific ways, and who has still the habit of thinking for himself, can understand it. That this remark is no exaggeration was shown in my paper, "Hippocratismus," in the October, 1910, issue of THE MEDICAL COUNCIL. In my book, "Carbonic Acid in Medicine," are given all the physiological explanations why carbonic acid is the ideal remedy in dysentary.

The mode of application is simplicity itself by means of a gas generator in the form of a bottle holding a pint or less with a wide neck and a rubber stopper perforated so as to admit a tube, with a nozzle. A solution of about 6 drachms of bicarbonate of soda in about four ounces of cold water is introduced into the bottle, and four drachms of crystallized tartaric acid (if pulverized acid is used the development of the gas goes on too rapidly) are added. The larger these crystals are the better. The bottle is then closed, and the carbonic acid developing in the water rises through the tube, the nozzle of which has been placed into the rectum. The development of gas in the bottle lasts about ten to twelve minutes. In a few seconds after the gas enters the rectum there is produced a sensation of warmth in the anus. Some patients will tolerate the current of gas for two or more minutes. As soon as they complain of unpleasant sensation of fulness in the abdomen the nozzle is withdrawn, or the patient may void the gas without removal of the nozzle. After the gas has been thus voided the nozzle is reapplied and the application, with or without interruption continued until the gas in the bottle has become exhausted. It is advisable that the physician who is not familiar with the method tries it on himself first. It is by no means an unpleasant procedure. In my book I have described other forms of apparatus to apply the gas, but this is the simplest and can be handled with safety and without difficulty by the patient himself if for some reason or another the physician cannot come to the patient's house as often as he wishes.

A. ROSE.
173 Lexington Avenue, New York.

Inflamed Joints.

The *American Journal of Clinical Medicine* gives the following mixture for this affection:

Acidi Salycili, dr. iij
Tinct. Opii, dr. jss
Ol. Terebinthinæ dr. j
Ol. Caryophilli, oz. iij
Alcoholis, q.s. oz. xij

Rub on the affected parts every two or three hours. Chloroform may be substituted for the oil of cloves if desired.

It is important that any subscriber who changes his location should at once notify us of his change, giving his old address also, so as not to miss any numbers of THE COUNCIL.

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Rotating the Posterior Occiput—The Modified Porter Method.

Replies and Further Comments. By Dr. Arnold.

Editor Medical Council:

Will you kindly permit me to answer a few inquiries and make a little note of explanation to the Council readers concerning my article in the April number, on "The Reiteration of Some Important Points in Practical Obstetrics."

I have been much pleased with the criticisms, both favorable and unfavorable, that have been elicited by this paper, especially that portion pertaining to the rotation of the posterior occiput. From communications I have had, and from reports from those who have tried the method described, or who expect to try it when opportunity presents, I am encouraged to hope that the paper will, in some measure at least, accomplish its two-fold mission, namely, the protection from undue suffering and serious injury of a comparatively large number of women, and the providing of a practical method of escape from what is often a most vexing situation for the obstetrician.

By way of correction of an error in the illustrations of my article let me say that Fig. 4, page 131, should be viewed from the right margin of the page, otherwise it is misleading, your printer having unfortunately placed this cut in the wrong position.

As to the functions of the "external" or *right* hand, some of your readers are evidently not quite clear. It plays two very important parts in the manipulation, one to hold the head from being pushed out of the pelvis, and the other, by its lever-like action, to supplement the work of the left in producing rotation.

Some of my critics still assert their disbelief in the possibility of rotating the head without pushing it out of the pelvis, when it has descended with the occiput in the hollow of the sacrum. The only answer I can make to such unbelievers is to ask them to *try it*. I am sorry I cannot give a practical demonstration to all who have failed to understand the method, or who doubt its practicability, but where such demonstration *has* been possible, as with several of my Philadelphia friends, all doubts have been cleared away. If the method is clearly understood and carefully followed, failure is well nigh impossible. That my explanations and illustrations have not been fully understood by all your readers, is shown by the following communication from a doctor in Connecticut: "How the left hand, with the thumb pointing downward and applied to the occiput, and pressure exerted toward the mother's right, can, at the completion of rotation, be found with the thumb directed upward, as illustrated, is more than I can understand. It would seem to me a physical impossibility. If pressure were brought against the temporal region of the child, and the face turned to the right, then the left hand would follow and naturally be inverted at the termination of rotation, and would be found at the mother's right, with thumb uppermost as illustrated. If the occiput is to be carried upward and the face downward, the exact reversal of the hands would seem to me the correct method. Can you understand my contention and place me right?" I think I see where the doctor misinterpreted the illustrations, and for fear others may have made the same mistake, I will briefly point out the place of error. Evidently our Connecticut friend has supposed the left hand to be in a position of *pronation* instead of *supination* at the beginning of the maneuvre. If he will study the illustrations a little closer he will see that, by placing his left hand in supination and rotating the palm well outward (before inserting the hand in the vagina) it can be applied to the *right side* of the occiput, with the ulnar border of the hand upward and toward the mother's left, and the thumb downward and toward the mother's right. Then by re-rotating the hand in the only direction possible, it will carry the occiput toward the mother's right and to the anterior, and will leave the hand with its palm to the side of the child's head, and the thumb pointing up as shown in the illustrations.

Trusting that this note may help to clear up some of the doubtful points above referred to, and that others of your readers may have as gratifying results from a trial of the "modified Porter method of rotating the posterior occiput," as have already been reported to me, I am

Respectfully yours,

J. O. Arnold, M.D.
2503 N. 18th St., Philadelphia.

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The Business Side

OF MEDICAL PRACTICE

While we, as physicians, desire to be scientific students and practitioners of medicine, yet we desire also, for the welfare of our dependent ones and for the sake of our standing in the community, to secure a fair compensation for the services we render to our fellowmen.

The Lure of the Land and the Middle-Aged Doctor.

By THOMAS S. BLAIR, M.D.,
Harrisburg, Pa.

(*First Paper.*)

Years ago, before this over-strenuous age, Dr. Andrew Jackson Howe said: "At the age of 50 the weary and worried lawyer, minister, or doctor should have a farm to look after—he should hunt and fish and row and ride. In the cultivation of choice fruits and fine stock the gentleman farmer wholesomely exercises both mind and body; but to retire from business and do nothing is exceedingly dangerous." This is just as true to-day, provided sane methods and reasonable expectations are indulged. A recent issue of a Southern California paper contained this little squib: "There are a number of cruel jokes in this world, including the one on the town man who drifts back to the soil to make an easy living." This phase of the matter should always be borne in mind.

Indulging in just a word or two of idealism, we wish to present the business phases of this matter more particularly. There is no doubt at all that many physicians who are seeking rest and relaxation find in agriculture and horticulture that for which they are looking. The man who loves nature and likes to see things grow derives infinite satisfaction when lured to the land. The scientific side of the matter is understood by none better than by the observing physician, and there has been much of value in agricultural and horticultural science added by physicians who have intelligently entered the field. It is an infinite satisfaction to improve in health and see a sturdy family growing up in a rural location, and to know that the increased land value and the developing trees are deposits in nature's bank for the ease and comfort of later life and the family after one is gone. One knows that a fickle public cannot rob us of what we have helped nature to create, and it is agreeable to know that your competitors are not after your profits but are merely trying to see if they cannot grow sweeter peaches or more apples to the acre than are you.

But, on the other hand, agriculture and horticulture are exacting sciences and are not learned in a day. The doctor wholly inexperienced in practical culture is more apt to fail than to succeed if he rushes in without preparation. If you are contemplating ultimately retiring with the expectation to derive profit from the cultivation of the ground, *now* is the time to begin learning the details of an exacting line of endeavor. It does not take a big patch of strawberries to teach one how to grow them. The matter cannot be wholly learned out of a book. Get a vacant lot in the suburbs where the soil is of the best, fence it well and start a little experimental ground of your own. Cut out baseball and run out every day for a couple hours, and read the best books and journals at leisure. The exercise will be good for you and, at the end of the season, you will be very little ahead financially—plenty of things will have failed for you—but you will have learned a lot and determined for yourself whether or no you are adapted to the work and are apt to make a success of it. Also you will meet new people and pick up new practice, and a lot of poor chaps will have worked out their bills upon your garden and young orchard. Take your wife and members of your family with you at times and try to interest them. If you fail in this, the probability is they will be utterly dissatisfied if you remove them to even the most charming bungalow in the country or the suburbs. It is not every woman to whom the "simple life" appeals, and a lonely or discontented wife away off from the usual environment is not a very satisfactory asset to rural life. Even yourself, used to the association of cultivated people, will find it irksome to settle down among even excellent people who, from your point of view, are of inferior intellectual attainments. One cannot be too careful of the home surroundings if you desire real happiness. Consequently it is usually best for the lure of the land to come from what a preacher would consider a good neighborhood for a church and a teacher would regard as a good school district and a neighborhood to which your city friends will be glad to come.

A city doctor advancing in years and who is thinking of cultivating the soil should do two things: perfect himself in a specialty

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and study his future work or fad, as he may view it. As a rule, a doctor retiring absolutely from practice is restless for a certain amount of his old work, and the practice of an office specialty for a few hours daily will leave him free for the rest of the day to do as he will or to cultivate his little farm. Also the beginning of special practice is *the time* to move, when a move is desirable. Plenty of doctors are too afraid of a move. A change often does one infinite good, and a new start is healthy for a man who has gotten into a rut. Even the disagreeable task of passing a new State Board of Examiners compels one to brush up all along the line and makes a better doctor of one. And, while you are building in a new location, it is a great help to have something growing for your table and probably enough to sell to pay the grocery bill and the taxes. It is so easy for a doctor to establish certain conventions. Many of us would hesitate to go down to the grocery and offer six dozen eggs for sale, or we would feel queer to have to motor past our town with a rake or a bag of fertilizer in our auto, but we would not mind it at all if we begun that way in the new location. Probably the most of us would succeed better as a combined doctor and agriculturist in a new location where practice would be light enough to allow us to properly look after the crops and where we were poor enough to be *compelled* to make the farm work *pay*.

So do not wait until you are too old to be successfully transplanted to a new environment and a new line of medical practice unless sufficient money has been saved and so invested as to assure an adequate income. It is no joke for a man of fifty to start even light agriculture, and it is all but impossible to the man of sixty.

To the doctor lured to the land in his own locality, there is much less to learn. Hosts of country doctors own farms and are saving money. We are not addressing these men. Nor are we speaking to the *young* doctor in town. He would very probably be doing a foolish thing to take up any branch of agriculture along with his practice. As regards the middle-aged doctor, he wants to develop a pleasant rural place in which to spend his old age and assure creature comforts to his family. In doing this, he should take a long look ahead. It is pleasant to end our days among our own relations. In this hurly-burly age, staying at the old home-town seldom assures this. The young people marry and move away, or business or school calls them elsewhere. And the old friends die or move away to live with their children. There is more likelihood of keeping pleasant neighbors in a rural suburb than there is in town. Choose such a suburb in a pleasant place *near to a large and growing city* where your children can succeed and where they are close enough to run out frequently to see you. As a man grows old, he prefers a soft climate, and is not only happier there but is apt to live longer. When the middle-aged doctor moves, it is well to bear this in mind.

As regards general farming or horticulture as a business to the practical man of youth and strength, there is a good outlook in most of the States of the Union. The tales of large profits somewhere away off could be duplicated right at home, nine times out of ten. No climate or soil suits every crop, and market conditions equalize things pretty well. The farmers of Pennsylvania, Iowa or Kansas can show as good bank balances as do those of Oregon, California or Florida. There are good and bad everywhere, and different men and differing methods make farming pay all over this broad land, and in every State it is hard work to make money in farming or horticulture. Even in Florida or California, the average farmer of small means will make a greater success raising farm crops and stock than he will in the cultivation of the specialties for which these States are famous.

But we are talking to the middle-aged doctor and he has not the strength to do general farming unless able to hire most of the heavy work done. We have had some experience in this sort of thing ourselves and can assure our readers that a general farm must be lived upon and personally worked upon to yield as great a percentage upon the investment as we would receive from houses to rent or money loaned upon mortgage. Farming is a good business for the farmer, but a rather uncertain one for other people.

Doctors receive so much promotion literature exploiting distant land and so many buy land on contract for the planting of oranges, lemons, coffee, eucalyptus and other tropical or semi-tropical products that we propose to outline somewhat conservatively what a middle-aged doctor can safely do along this line. We will do so by districts, and not in this present paper. In our

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next paper we will discuss the old South and the tropics.

But, first, let us give some *general* advice: Don't leave your present location simply because you are tired or discouraged. A little vacation and seeing that doctors elsewhere have to work just like you do may make you glad to go home and be contented. Don't conclude that the fault is with the medical profession as a profession, when things are not going right with you, and then immediately conclude that the promotion literature is all true and you would better throw up practice and go and buy land and watch things grow as per schedule. Literature issued by chambers of commerce or boards of supervisors is more reliable than is that issued by private companies. It is certainly unsafe and far from wise to buy land without direct personal investigation. If moving to a new locality, it is best to rent for a while and study local conditions before purchasing. Do not expect to make a great deal of money from the amount of produce a middle-aged man can raise by his own effort. Do not buy more land than you are sure you can cultivate cleanly and effectively. Do not grow crops for which there is no regular available market. The most discouraging thing a man can do is to attempt to farm poor or worn-out land. Do not buy too many tools. Do not stock up heavily with animals or poultry until you are sure you can take profitable care of them. Do not forget that trees come slowly into bearing, and you must live meanwhile. Let the other man try expensive experiments. Take advice from men long on the ground. A middle-aged doctor should not shorten his life by buying uncleared land and trying to clear it himself. Because you may be trying your hand at cultivating land, do not neglect medicine or your practice and keep on taking the best medical journals.

This is the first paper of a series of four papers written especially for this department by Dr. Blair. The three papers to follow make an analysis of the regions the Doctor is mostly likely to consider as a place to retire to in his old age. The titles are: "The Old South: In the Tropics"; "Florida Land"; "California."

"Doctor," said the sick man, "I'm afraid my nerves are in bad condition." "Oh, no," replied the physician, "that's not what is the matter with you. The fact that you have sent for me after ignoring the statements I've been sending you regularly during the past year and a half indicates that your nerve's all right."—*Chicago Record-Herald.*

Land in the Vicinity of New York.

An old and valuable contributor writes us a private letter, from which we take the liberty of quoting the following extract:

The note on the Wading River Estates in your February issue interested me, as I had some dealings with the firm selling that land. In 1908 I bought two lots from Keeves & Co. at Holliswood Park, and before they were fully paid up, they sold the lots for me at a fair profit. I next bought from them some lots in East Massepequa which the firm also disposed of at a profit. In the fall of 1909 I bought from them 37 lots in Somerville, N. J., but before they were fully paid up, my son died and I could not meet the payments. When they found under what circumstances I was placed, they offered to extend the time of payments, or to refund what I had paid. As I was hard pressed for money for the funeral, I asked them to return what I had paid, and they did so without a moment's hesitation. Since then I have gone to several tracts of land that they had for sale and invested again. They buy up good farm land and cut it up into building lots. I don't know anything about the Wading River property, except that it is on high ground adjoining a State experimental farm station, and wouldn't hazard an opinion as to its value as an investment. The locality is ideal for a summer or permanent residence, but it is too far from the city for a workman who must come in early every day. In simple justice to this firm I will say that they made every promise to me good. As I have come out ahead in several small investments in land around New York, I will take the liberty of making a few suggestions to those who contemplate investing small sums in land.

Land on Manhattan Island is out of the reach of the small investor. The cheap land in Brooklyn is near Jamaica Bay, and is mostly swamp and marsh. There are still some cheap lots on the roads to Coney Island; but the building booms in that direction seem to have died out. The nearer to Coney Island, the more swampy the land becomes. It may take a generation before that land will be filled in and after that it will be valuable. There is some cheap land in the Borough of Queens, which is good and easily accessible. The large tracts of swamp land around Jamaica Bay are worthless at present. It will be good after improvements in the bay are completed; but as they have not yet been begun, and it is estimated that it will take at least ten years to complete them, don't tie up money around Jamaica Bay. Land near the main lines of the L. I. R. R. and near the hill section is good, and will rise in value.

The north shore villages and development sections are all good, but dear. There is an immense amount of ground between those villages and the villages along the main line of the railroad, mostly farm land and woods, which development companies are after. While there are no transit facilities at present, if any of that land gets on the market cheap, I'm going to get some. Land in the Bronx is dear, except in inaccessible parts near the Pelham line. The large tracts in this part of the city are held by wealthy estates and are usually sold at auction,

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after they are cut up. Wherever such tracts have been disposed of in this way, building soon begins, and transit facilities follow. The investor must be on hand to bid, and he must be provided with several hundred dollars as a deposit. These are the only lots on which there is a reasonable assurance of increase in value within a few years. There is no question about the ultimate increase in all land values in this city, especially the land exploited at present by development companies. The small investor is, however, interested in his own welfare, rather than in the welfare of prospective grand-children. As an investment which may take five, or probably ten years for large returns, Staten Island looks good. Land along the south shore is good, mostly high, easily accessible and cheap. Anything along the line of the railroad is good the nearer to Tottenville, the cheaper the land, but the higher the commutation rates. Fares, however, will come down, while the land will rise in value.

I. L. N.

A Texas Promotion from Chicago.

EDITOR MEDICAL COUNCIL:

Can you tell me anything as regards the reliability, etc., of the Texas-Gulf Fruit Land Company, claiming to own a large tract of land bordering on Matagorda Bay? Their headquarters are 301-303 People's Gas Building, Chicago, Ill.

R. A. PRICHARD, M.D.

Rush, Ky.

We have no definite knowledge of this company, as the doctor did not send the literature which he received from them. In addition we will say that the southern land schemes that are put forth by northern promotions are, in all instances which we have examined, practical frauds. Either the land is worthless in character, or is so inaccessible as to be of no value or is sold at about ten times the price of land in the immediate neighborhood. We do not know whether that is the case with this proposition or not but almost certainly before this issue has been out a week, we will hear from some physician residing in the immediate vicinity stating his knowledge of the situation.

From a study of the map, it seems that the region of Matagorda Bay must be rather low, and probably the water overflows it from the gulf. Matagorda County has no railroad, and has very few towns; it looks like an investment there would be a long time coming into great value.

EDITOR MEDICAL COUNCIL:

In reply to your questions "What are the 3 most prevalent diseases in my practice?" I will say: 1. Rheumatism. 2. Nose and throat diseases. 3. Skin diseases.

In answer to the physician's questions about obstetrics, I can only tell what my fees are: 1st. I never make a second visit after confinement, unless it is necessary, then I charge for it. 2nd, $10.00 for ordinary case. 3d. $1.50 for a visit or a call under one mile and $.50 for each additional mile. 25 per cent. extra for night calls, except obstetrical cases.

R. D. RAMEY, M.D.

Garden City, Mo.

Fake Land Schemes.

EDITOR MEDICAL COUNCIL:

I cannot refrain from writing and telling you how highly I think of your magazine and particularly of the business side, and advice you give each month. By the way, can you tell me why physicians seem more easily separated from their hard earned money than other men of equal condition? From their profession they must be educated, and should be reasoning men. Yet the writer has received many letters from men high in the profession who have allowed themselves to believe the statements made by some of the land companies who are spending fortunes to advertise Florida lands, which they have bought in large bodies at a few cents an acre, and are selling on easy terms for from fifty dollars an acre upwards. These lands are mostly covered by swamps, malarial swamps, which, according to the literature are to be drained and will then become most productive. The people who live, and have homes in Florida, largely from Northern States, do not believe that these swamps will ever be of any real worth even if drained. But still hundreds and thousands in the North are buying on monthly payments. That these swamps are many miles from transportation is glossed over by the statement that railroads are to be built. Pictures taken miles away from the swamps are printed and labeled from the drained lands. Your advice, in every instance noted by this writer, will save your readers money. Tell them to investigate before parting with their money. Many of our otherwise reputable State papers have sold space to these companies, and therefore do not feel like printing warnings against them, but many of these newspaper people have written to the writer commending him for giving the note of warning. But many never hear any word to warn them. That there are places most desirable in Florida is a fact, but the land companies do not control any of the really desirable lands. They belong to people who live here, and it is not wise to buy Florida lands from Chicago, New York, or Philadelphia land companies.

Sincerely yours,

S. A. MURDEN,

Editor *Tropical Topics.*

Modello, Dade Co., Fla.

Doctors' Charges.

While making some professional calls in a sparsely settled district, I came upon a little, plump, rosy-cheeked girl, trudging toward home, with her slate and dinner pail in her hand. I asked her to ride with me. I could see that she was a very timid child, and efforts to engage her in conversation were unavailing. She would meekly answer "Yes" or "No," but not another word would she speak. A few weeks later I was called to the little girl's home to attend another member of the family for a slight ailment. When about to leave, the mother spoke up smilingly, and said: "Do you remember my little girl riding with you a few weeks ago? Well, when she got home she said, 'Mamma I rode from school with the doctor, and he kept talking with me and talking with me, and I just didn't know what to do, for you know doctors charge you when you talk with them, and I didn't have any money."—*National Monthly.*

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BEST IDEAS FROM RECENT LITERATURE

Report of Work Done on the Verumontanum.*

By Lawrence T. Price, M.D.,
Richmond, Va.
Instructor in Genitourinary Surgery and Venereal Diseases, Medical College of Virginia.

Before going into the subject which my paper covers, I think a review of the anatomy and physiology of the verumontanum might be well.

The verumontanum is a small body about the size of a grain of wheat, situated upon the floor of the prostatic urethra, about one-fourth of an inch anterior from the vesical orifice. It is composed of erectile tissue and covered by mucous membrane. In the center is a blind pouch about an eight of an inch deep, called the sinus pocularis. This body is supposed to be the analogue of the uterus in the female.

Its functions so far is thought to be a kind of back stop, so to speak, to prohibit the flow of semen back into the bladder. The ejaculatory ducts open into the urethra at the base of the verumontanum in front; the prostatic ducts in a depression on either side.

About six months ago my attention was called to a class of conditions which was relieved by treatment of this body; so, since then, when the opportunity presented itself, I have had the satisfaction of relieving some patients of some very annoying conditions. I have never seen anything in text-books or literature along this line, so the treatment and the technique had to be worked out.

Upon endoscopic examination of this body, you can see it very readily protruding from the floor of the urethra. In the normal subject the mucous membrane covering the verumontanum is like the rest of the urethra, except slightly injected and very vascular. In the class of subjects to which I will refer, the appearance of the body is a state of inflammation, somewhat larger, protruding, bleeds very readily and is very sensitive.

The symptoms complained of are frequency of urination, pain and burning in the deep urethra, the pain sometimes being referred to the glans penis, down the thigh, scrotum, buttock or in the groin; frequent nocturnal emissions; spermatorrhea and premature ejaculations, the slightest provocation producing an erection and flow of seminal fluid; and the form of neurosis usually referred to as sexual neurasthenia.

Patients complaining of this trouble usually have their complaint put under the head of prostatitis, and I used to accept this as a fact, but by giving the treatment for this condition, the patient would invariably not be relieved. You will usually get a history of the individual having masturbated freely, or had a prolonged case of gonorrhea.

The logic of the idea that masturbation is the cause in many instances is very feasible, for the reason of the body being composed of erectile tissue, sexual excitement would cause a congestion which, when frequently and continuously indulged in, would become chronic. This state of chronic inflammation may also be caused from the result of a urethritis.

The treatment which I have carried out is either to inject into the sinus pocularis with a long-shaft syringe a solution of 10 per cent. silver nitrate or cauterize the surface with a 15 per cent. solution with cotton on an applicator. The pain from either of these treatments is rather disagreeable for two or three hours, and the symptoms complained of will be exaggerated for two or three days, but after the effects of the cauterization begin to clear up, so do the symptoms.

The most gratifying results have been in patients classed under the head of sexual neurasthenics. In a few instances, a second treatment has been necessary, though it should not be repeated under ten days or two weeks. During the second and third days, a little bleeding may be noticed from the urethra. No further treatment is necessary except to pass a full sized sound about twice to avoid any narrowing of the canal.

The cauterization does not obliterate the verumontanum and destroy its supposed function, but the condition of inflammation is relieved and the size of the structure is reduced to its normal condition or possibly slightly smaller.

During the last six months I have had twenty-two cases which were subjected to the above treatment. The following are typical in symptoms and were relieved by the foregoing method:

*Read before the Richmond Academy of Medicine and Surgery.

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Case I. A. W. H., aged 24; general health had always been good; venereal history negative; masturbated considerably since puberty until now.

Examination: All generative organs normal except prostate slightly flabby. Cystoscopic and endoscopic examinations negative. Complained of spermatorrhea, nocturnal omissions, a sensation at completion of urination as if he had not finished, a feeling of burning and itching deep in the perineum and an erection produced on little or no provocation. Patient very excitable and nervous, exhibited a great deal of concern about his future sexual powers.

Treatment: Injected two minims of 10 per cent. solution silver nitrate into the sinus pocularis. Symptoms after eight days cleared up; his mental condition began to improve rapidly and in about two weeks the patient was well and has remained so.

Case II. C. B., aged 27; well-developed man. Previous venereal history negative until about eleven months ago, when he contracted a gonorrhea which apparently was cured after eight months, though he would occasionally see a drop at meatus in the mornings. Four weeks ago began to have pain in the perineum referred along the urethra and into both testicles, frequency of urination, slight pain while voiding, unsaticfactory erections and premature ejaculations nocturnal emissions and considerable concern mentally regarding his future sexual powers, as he was to be married shortly.

Examination: All sexual organs normal; urine had a few shreds in all three glasses. Endoscopy revealed a very congested verumontanum. lips of the sinus pocularis pouting and edematous.

Treatment: Injected three minims of 10 per cent. silver nitrate solution into the sinus. All symptoms disappeared in ten days and the verumontanum presented a normal appearance.

The only other condition which simulates this condition near enough to be mistaken for it is prostatitis, though the symptoms of the latter are not at all unlike the lobes caused from inflammation of the verumontanum. By an endoscopic examination, together with a digital examination of the prostate gland, all uncertainties as to differential diagnosis can be cleared up.

Remarks on Treatment of Chronic Disease.*

J. Madison Taylor, A.B., M.D.
Philadelphia, Pa.

Dr. Taylor presented personal experiences and convictions in treating cases of chronic or protracted diseases and disorders. He laid stress on the fact that the body is made up not of various detached and independent pieces like an insentient machine, but consists of one living entity, in which all the parts depend for maintenance of integrity upon (1) the physiologic interdependence of each part upon the whole; (2) the efficient co-operation of all those mechanisms or systems which contribute to the vital processes, among which are (a) the noble organs, (b) the systems, nervous, circulatory, digestive, respiratory, genitourinary, not forgetting the practical compensatory functions of the skin and muscles, all whose actions must be encouraged and enhanced; (3) the autoprotective forces, as made clear by Sajous to reside chiefly in the adrenal system (adrenals, thyroid, pituitary), and (4) the whole dominated by the psychomotor and other machinery of consciousness. The day of specific medication is past, notwithstanding occasional brilliant metiors like 606 and vaccine therapy.

To secure best results in protracted disorders (which constitute complex blends of disorderly thinking, feeling. willing, along with degrees of depression or exaltation in function and in structural disintegration) it is important to reach an actual diagnosis of the major pathologic states, but also a relative estimation of the functional integrity, *i. e.*, the vital status of the individual. No matter what the organic or other tissue damage, or the kind, degree or curability of the more obvious morbid processes, it is entirely possible to secure such mitigation of distresses, disabilities, or even structural disintegration, by rational and general therapeusis as shall prove gratifying. It is even possible to go far toward holding in check these losses in vital equilibrium.

He showed how these desirable results can often be obtained; how life can be rendered more endurable, agreeable. efficient, and relative cures effected and persistent employment of simple, rational procedures included under the term *"reconstructive personal hygiene."*

He urges that clinicians make a diagnosis of the status of the potential equilibrium as well as of the specific pathologic status, not neglecting either.

The treatment indicated should include customary measures, but a more than ordinarily faithful scientific *study of collateral factors,* which contribute to uniformity in well being, securing physiologic harmonies.

The only way to do full duty to sufferers from lingering maladies is to give them every available opportunity for reaching a higher level of mental and physical efficiency. This can be done, often to a surprising degree, by measures supposedly familiar, principles well enough known, but too often inefficiently applied, because the clinician has omitted to attain skill in their application or direction. Dr. Taylor shows from his own experience how use can be made of a number of forceful measures available in any home, by any physician which not only conserve and enhance the pleasure of living contracted lives, but add much to the power of specific medication. To do so it would seem important that the clinician become familiar with neuropathology, and also psychopathology, to attain skill in broader lines of diagnosis based on these and by thinking in physiologic factors, also in the use of efficient auxiliary or rational measures, some of which are usurped, elaborated and overpraised by irregular practitioners.

Many of these last afford invaluable hints which it is well to study, to determine their field of usefulness, and make use of them.

In short, the physician should become a master of reconstructive hygienic measures for both mind and body.

He describes briefly several valuable procedures capable of being applied by any one in any home, whereby the whole organism can be raised to a higher level of functionation

*Abstract of paper read before the annual meeting of the American Therapeutic Society, Boston, May 13, 1911.

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Treatment of Gastric Complications of Incipient Tuberculosis.

As regards their diagnosis and their treatment the gastric complications of early pulmonary tuberculosis are of prime importance, according to Dr. R. G. Torrey, Philadelphia (*Therapeutic Gazette*, January 15, 1910), for these reasons: (1) A large percentage of cases of tuberculosis first seek medical aid on account of the complications. (2) Authorities agree that in all such the chest should be explored to eliminate or implicate tuberculosis. (3) Autopsies of all advanced cases of tuberculosis show that in every instance gastric disease coexisted. (4) Successful treatment of tuberculosis depends largely on good digestion.

While the tuberculosis specialist may protest that rest, milk, eggs, and fresh air will accomplish all that is possible in this condition, it still seems reasonable to contend that the milk and eggs can offer more immediate aid to the general economy if a little well-timed help be offered to the jaded stomach. True, evidence of the latter tends to disappear under rest, careful hygiene and diet, but the improvement is so much more prompt under tonic treatment that neglect of attention to the stomach seems unjustifiable.

These patients lack the necessary rest, and the diet has been dictated by fancy or by necessity. Insufficient or unsuitable food has made matters worse. A patient will assure you that he eats good plain food in moderation, that he eats slowly and regularly. Ask him to name in detail the articles of food and the amount of each which he had this morning for breakfast, this noon for lunch, last night for dinner. You will often be surprised at the dietetic habits of people who are apparently intelligent. Inquiry as to the regularity and character of bowel movements should be explicit.

Instructions as to care of the teeth, mastication of the food, sanitation, rest, air, food, etc., having been delivered, the question of a tonic or stomachic follows. If required tincture of nux vomica in increasing dosage up to about twenty drops will be found satisfactory, either alone or in combination with the compound tincture of gentian. In rare instance nux vomica aggravates the nervous symptoms. In this event the dose should be reduced or another remedy selected.

Huxham's tincture seems to be a good stomachic, and nux with soda bicarbonate before meals appears to give excellent results. A good prescription is the familiar one providing for soda bicarbonate gr. x, tincture of nux vomica min. xv, tincture of gentian comp. to 1 drachm, taken before meals.

Creosote is highly recommended by some excellent authorities, to be given in small doses combined with tincture of gentian comp., starting with a couple of drops of the creosote and increasing up to four or five drops.

The dilute hydrochloric acid combined with nux may be given when estimation of the gastric contents has shown the acid to be lacking or decreased, or when belching and fermentation are in evidence. The acid may be given up to twenty to thirty drops with meals, taken through glass tube.

In cases showing hyperacidity use extract of belladonna, or the tincture of this drug, with silver nitrate in doses of 1-16 to ⅛ of the extract, with ¼ grain of the silver salt, given on an empty stomach. Generally two or three weeks is long enough to continue this or similar treatment. It is best in every instance to watch carefully for the disappearance of symptoms and try withdrawing the drug for a few days.

Incipient Pulmonary Tuberculosis Treated With Antiseptic Inhalations.

Strong emphasis is placed on the value of *continuous* antiseptic inhalations in the treatment of incipient pulmonary tuberculosis by Doctor Lees (*Proceedings Royal Medical Society*, December, 1909), the following being the essential conditions:

(1) It must be continuous and constantly in operation during the whole of the twenty-four hours, except at meal-times.

(2) The inhaler employed must be light and capable of being worn both in the daytime and during sleep; it must not hinder respiration, and it should be cheap.

(3) The solution employed should be as strong as possible, and it may with advantage be composed of a combination of several volatile antiseptic substances.

Doctor Lees has employed this treatment during the last four years, relying upon the simple oro-nasal cage of perforated zinc advocated by Doctor Burney Yeo. This cage is worn over the nose and mouth, and kept in place by elastic bands behind

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the ears. It contains simply a sponge or bit of felt on which the following solution is dropped:

℞ Acidi carbolici, 3ij
Creosoti, 3ij
Tinct. iodini, 3j
Spt. ætheris, 3j
Spt. chloroformi, 3ij

Sig. From six to eight drops every hour during the day, and if the patient is wakeful, two or three times during the night.

Care must be taken to keep the skin under the cage perfectly dry, lest it become stained or sore. The odor is not unpleasant. Cough and expectoration rapidly show benefit without additional treatment. The solution shows no tendency to irritate, nor does it cause hemoptysis. Should hemorrhage occur the addition of a little turpentine to the solution is indicated.

The absolutely continuous use of the inhaler (except at meal-times) must be rigidly required, and it is very desirable to keep the patient at rest in bed for a week at least, the windows of his bedroom being widely open. During the second week he may be allowed to rise for an hour or two daily.

When the temperature is normal, after the first ten days or so, the treatment may be omitted every morning to afford time for a walk in the open air. Thus the time of the inhalations is gradually decreased, while the outdoor life is increased.

Import of Dietetics in Successful Therapeutics.

Under the general title, "Some Advance in Therapeutics," Dr. C. M. Riley, Alton, Ill., points out (*Illinois Medical Journal*, May, 1910,) that a correct dietary is not merely auxiliary but absolutely essential to successful medical treatment. In brief these are his statements.

The various cell structures of the body each have their affinities for certain drugs. This is now well recognized and advantage taken of in therapeutics. But a similar affinity pertains to the different foods in the process of assimilation. This is by no means so well understood, though of equal importance with the foregoing. This importance is now quite well appreciated and much progress is due in the therapeutics of diet.

The human machine will only work smoothly and perfectly when all its parts are not only properly adjusted, but when kept in the best condition. Nature's army of defense must be properly fed and taken care of. The food must be adjusted to the individual needs of the various parts of the machine. Many physicians still direct the diet of their patients as if the digestive system of every one was constructed on one invariable plan, and any defect or disarrangement was always in exactly the same spot. The chemistry of foods and the changes which they undergo in the process of cooking, which is only a variety of chemical reaction, are worthy of much study. Indeed, our most advanced medical schools have already taken up the subject. This is a good step in the right direction, since the combination of proper dieting and rational therapeutics often produce our best remedial effects; in fact, good management of the diet is often necessary in order that our medicines shall have their desired effect at all.

Therapeutic Application of a Low Protein Ration.

Without doubt the most powerful therapeutic measure, which can be brought to bear in combating maladies dependent upon entero-toxins resulting from intestinal putrefactions, is a low protein or anti-toxic dietary, Dr. J. H. Kellogg, Battle Creek, Mich. (*The Lancet Clinic*, May 14, 1910), points out in clearest terms. Continuing, he writes in substance as follows:

Our sagacious forefathers made very shrewd observations, some of which modern progressive medicine, with its delight in innovation, has apparently forgotten. These shrewd men—Sydenham, Cullen, Trousseau, John Mason Good, and their disciples—prefaced every prescription with an opening purge, though wholly ignorant of the wonderful facts made known to us through the researches of Bouchard, Roger, Escherich, Tissier and Metchnikof.

It is possible to divide foods into two classes—high protein or toxic foods, and low protein or anti-toxic foods. Combe enumerates many symptoms and the following maladies which may result from a high protein dietary leading to autointoxication: Gastric crises, irrepressible vomiting, periodical diarrhea, bilious crises or so-called bilious attacks, cholemia, hepatic insufficiency, jaundice, hepatic cirrhosis, gall-stones, pseudo-angina, tachycardia, bradycardia, arrythmia, fever, intermittent fever resembling malarial fever, subnormal temperature, elevation of blood-pressure

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due to spasm of the small vessels, angina, dyspeptic asthma, pseudo-pneumonia in infants, neurasthenia, headache, migraine, petit mal, grand mal, mental disorders, secondary anemia, pernicious anemia, senility, chronic nephritis, various skin disorders such as urticaria, eczema, acne and furunculosis.

Antitoxic foods—such as fruits, cereals and fresh vegetables—combat intestinal putrefactions in several ways: (1) Antitoxic foods are practically sterile, being free both from bacteria and from bacterial poisons. (2) Foods of this class discourage growth of bacteria in the intestine through the formation of acids which prevent the development of the anaërobic or toxin-producing species of bacteria. (3) Antitoxic foodstuffs, through their great bulk, and especially through the presence of cellulose and other insoluble substances, encourage intestinal activity, thus hastening the passage of the foodstuffs through the intestine, thus giving no opportunity for putrefaction and the absorption of putrefactive products.

Of our various antitoxic foods rice is named as one of the most valuable.

Fruits, as well as cereals of all sorts, are highly antitoxic, and should constitute a large element in the antitoxic dietary. Fruits contain protein in small proportion only, and fruit acids hinder the formation of bacterial toxins. Vegetable proteins are less putrescible than animal proteins because less easily attacked by bacteria, and also because received into the body in a sterile condition. Vegetable fats are more readily digestible than animal fats and less likely to encourage intestinal auto-intoxication.

We advise our readers to send to the Editor and Chief of the Division of Publications, United States Department of Agriculture, Washington, D. C., for the following two very important pamphlets:

Some Facts About Malaria. By L. O. Howard, Entomologist and Chief, Bureau of Entomology, Pp. 13, figs. 6. (Farmers' Bulletin 450.)

This bulletin is issued in response to a popular demand for such information. It tells of the disease and its cause, method of infection and its prevention and cure. It also describes the malarial mosquitoes.

Remedies and Preventives against Mosquitoes. By L. O. Howard, Entomologist and Chief, Bureau of Entomology. Pp. 15 (Farmers' Bulletin 444.)

This bulletin contains directions for protection from mosquitoes and remedies for their bites, the use of smudges, fumigants, and deterrent plants, and for the destruction of larvæ in breeding places.

Medical Editors to Meet in Los Angeles, Cal.

The forty-second annual meeting of the American Medical Editors' Association will be held at the Alexandria Hotel, Los Angeles, on June 26 and 27, under the presidency of Dr. J. MacDonald, Jr., of New York, with the annual banquet on the evening of Monday, June 26, at the above hotel.

Among the papers to be presented at this meeting are the following, all of which are of interest to medical editors, and all doctors who are journalistically interested are invited to attend this session.

"Relation of the Medical Press to the Public Health and Marine Hospital Service," by Walter Wyman, Surgeon-General.

"The Advisability of Newspapers and Magazines Having Medical Editors on their Staff," by Edgar A. Vander Veer, M.D.

"Some Things I Have Learned as a Western Medical Editor," by Edward C. Hill, M.D.

"Some Elements of Success in Medical Journalism," by J. M. French, M.D.

"The Medical Reporter from His Own Standpoint," by E. Franklin Smith, M.D.

"Physical Therapeutics in the Medical Press," by Arnold Snow, M.D.

"What Shall We Publish?" by J. R. Phelan, M.D.

"The Extension of Advertising in Medical Journals," by S. DeWitt Clough.

"Medical Expert Testimony," by R. B. H. Gradwohl, M.D.

"The Hospital Bulletin as a Factor in Medical Journalism," by George W. Kosmac, M.D.

"The Literary Side of Medical Journalism," by T. D. Crothers, M.D.

"Private Owned Medical Journals," by Henry W. Coe, M.D.

"The Influence of Medical Journalism for Medical Progress," by W. Benham Snow, M.D.

"Editorial Independence," by T. G. Atkinson, M.D.

Subject to be announced, by C. H. Hughes, M.D.

Subject to be anounced, by William Porter, M.D.

A Correction.

In the May issue of THE MEDICAL COUNCIL appeared an article on the "Psychology of Investment." By a typographical error the name of Dr. Ross was printed as the author. The article was by Dr. Charles V. Cross, United States Examining Surgeon, of San Francisco. Dr. Cross aside from being United States Examining Surgeon for all branches of the Government Civil Service Departments, is also president of the Board of Pension Examining Surgeons for San Francisco. He is also ex-president of the Business Science Club, of San Francisco. This organization was formed for the purpose of studying the Science of Business. Other articles from the pen of Dr. Cross will appear in THE MEDICAL COUNCIL, "On the Business Side," and his knowledge of the subject enables him to write instructively and entertainingly on the business side of medicine.

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THE

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Saline Solution and the Treatment of Serous Membrane Inflammations and Infections.

Serous membrane inflammations may be merely serous in character and soon recover, but the tendency to fibrinous or to suppurative inflammation is ever present when an infectious agent finds entrance. Infective arthritis is an excellent illustration of how readily a protected serous cavity may be infected. Gonorrheal arthritis is generally observed three weeks after the urethral infection, and the fact that in many cases of such arthritis no gonococci are found in the infected joint is evidence that either a very slight infection or the products of bacterial growth suffice to set up serious joint trouble. Influenza may set up a severe arthritis apt to develop into arthritis deformans. Very grave suppurative cases may be caused by the pneumococcus. Typhoid bacilli give rise to some cases, while the several germs seemingly associated with acute rheumatic fever, as well as those productive of such diseases as scarlatina and diphtheria, all give rise to infective arthritis. Very naturally, the serous cavities less protected are even more readily infected. Micrococcic and streptococcic infections in joints may also give rise to endocarditis and even to chorea. The connections between rheumatic infection and the tonsil is an instance of infection of the serous membranes from a distant focus.

Absorption from serous cavities such as the peritoneal space, the pericardial and pleural cavities, is physiologically active. Even in *dead* animals such absorption is fairly active. In living animals, substances injected into serous cavities soon become isotonic with the blood plasma. If the foreign substance is hypertonic, the tissues supply water and the solution becomes exactly of the same osmotic pressure as is that of the blood plasma. If the substance is hypotonic, it loses water. Serous cavities will even transmit through them carmine granules and other solids such as bacteria and milk globules.

When we remember that the lymph spaces open freely into the serous cavities and that the osmotic tension of plasma is about equal to that of a 0.9 per cent. Na Cl solution, the following from Tigerstedt's Physiology completes our argument:

"If a hypertonic solution of common salt or of sugar be injected into the blood vessels, within a short time a large quantity of water passes from the lymph into the blood, while simultaneously the salt or sugar rapidly disappears from the blood, and the lymph stream becomes greatly augmented for a long time."

Especially note that the stream is augmented from the lymph channels, thus often relieving a closed serous cavity because of its lymphatic connection. It has been

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claimed that salt solutions were contra-indicated when there is edema, but what is stated above as well as the researches of Sollman seem to disprove this contention.

Lubomoudrov has shown that saline injected intraperitoneally or subcutaneously causes leucocytosis and increased phagocytosis. Sajous says:

"The introduction of saline solution into the organism enhances greatly the efficiency of the body's auto-protective processes. The proteolytic activity of the auto-antitoxin is greatly augmented."

There is ample clinical evidence that salt solution by proctoclysis is invaluable in peritonitis and that normal saline stimulates resistance in general infections. The value of normal saline in cholera is a marked instance of its applicability in infections. We do not propose going into details regarding such uses of salt, since they are well known. Very unfortunately, normal serum does not influence streptococci, and they are very apt to be found as the infective agent in serous membrane troubles. But resistance to streptococci is gradually established, and the use of normal saline may tide the case along pending the development of a partial immunity or resistance.

In view of all that has been said, we think there is ample justification to believe that the use of normal saline is particularly applicable when the serous cavities are inflamed or infected. This is well recognized as regards the peritoneum and in general infections incidentally involving the serous membranes.

We wish to suggest that the principle should hold equally good when the serous tissues of the joints are infected. Infective arthritis may come on very insidiously in typhoid fever and, on account of the condition of the patient in other directions, the joint trouble is not recognized. Gonorrheal arthritis is quite intractable once it is established. Why should not proper use of normal saline modify the course of or largely prevent the disease? And in case of infective arthritis during the course of general infections, it might readily be the case that prevention may be frequently secured by the saline solution so well known to be useful for the general condition. All surgeons know how thoroughly must a suppurated joint be laid open, irrigated and drained. We may prevent much suffering by anticipating such arthritis invasion. Arthritis deformans is a most intractable condition which we should do everything in our power to prevent. We are not in position to make any special clinical claim to sustain our present position, but saline solution can do no harm except possibly to very young children, and we believe the circumstances justify trying out our suggestion more fully than the tentative advances along this line have already indicated.

Probably as satisfactory a formula as any is that of Locke, as follows:

Sodium chlorid	0.900
Potassium chlorid	0.025
Calcium chlorid	0.023
Sodium bicarbonate	0.020
Glucose	0.100
Water	98.932
	100.000

New and Essential Points in the Treatment of Gastric Diseases.

The practician who has not more or less carefully sized up his knowledge of physiology since he first grasped his "sheep skin," thirty, twenty, fifteen, ten, or perhaps only five years ago, is behind the times in his ability to diagnose and treat disease of the gastric and gastrohepatic system by, respectively, that number of years. Great strides are being made in this field of research. So great has been the progress in the past three or more years that no text-book is recent enough to depend upon exclusively. We must aim to supplement by resort to certain leading journal articles issued by the home and foreign medical press.

Zeulzer, of Berlin; Bayliss and Starling, of England; Pawlow, of Russia; Metchnikoff, of France; Bowditch, Chittenden, Fisher and Fletcher, in the home country; and others in these and other countries have

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gone far in their discoveries toward giving us a clear knowledge of the physiology of the alimentary tract. Nor have they labored only for the perfection of the tedious, hard and technical methods of the specialist. The gist of their discoveries is eminently practical in the hands of the alert, general practician. Yea more, it is essential to a strictly modern and rational treatment of this group of diseases, whether by the physician or the surgeon.

We are not about to advocate that every general practician should open up for himself a well-equipped experimental laboratory. That would be urging what is neither practical nor possible. They have not the time for such analytical work—nor have they often available adequate work to justify the cost of such an outfit. Recent cases of *"dyspepsy"* almost never call for such an elaborate examination, and seldom would the victims submit with grace to its rigorous requirements. It is only the patient who has consulted "every doctor in creation," more or less, and who has been now disciplined to seek first of all for the true *name* of his complaint and to experience a goodly measure of satisfaction, even if he secures no more than about a yard of Latin, who cheerfully measures up to the requirements of a full laboratory diagnosis; provided, of course, the cost is *nil*, or of no concern to him.

What we here urge upon the general practician as not merely practical, but essential, is (1) a knowledge of the physiology of the alimentary canal—*the primæ viæ indeed* —that is well up to date. (2) A clear conception of every diagnostic point, the clinical value and position of each of the three stages in a modern diagnosis and, particularly, what are the far-reaching possibilities of the laboratory supplement or third stage in diagnosis. (3) A scheme of clinical approach and therapeutic procedure.

It is in place here to dwell somewhat upon what we have designated the three stages of a modern diagnosis.

(1) Not that we should detract one iota from the sole help of the old family doctor —that of plying the patient with questions. This is still our main and basic essential. But we should aim to make our questioning scientific, and always absolutely free from prejudice intrusted by the patient's gratuitous diagnosis.

(2) The second stage, of course, is the manual or physical examination by the well-known methods of palpation, auscultation and percussion. These can proceed satisfactorily only upon a scientific questioning relative to the evolution of the disease, character of the symptoms, etc.

(3) The third and final of the diagnostic stages is that of the laboratory with its multiplicity of schemes, apparatus, special instruments, etc. We have space here to name only a few of the most ordinary points that it is often necessary to be informed upon, one or two of which may suffice to clear up the most knotty case, and all of which belong solely to the province of the laboratory: The length of time taken by the food to traverse the alimentary tract before it is expelled from the body; whether the fasting stomach is empty or contains substances which may afford us diagnostic information; to what extent digestion takes place in the stomach and how long food remains there; whether the pancreatic and biliary secretions are normal; whether there is evidence of chronic pancreatitis or of any affection of the bile-ducts; the presence of catarrh or abnormal putrefactive processes in the intestine; and whether there is bleeding into any part of the gastro-intestinal tract.

The scheme we suggest should embrace particularly a classification of diseases and the general methods of treatment. It should be just as simple as possible and may be quite of the individual practician's own make. The minutiæ of the thousand-fold classification is only confusing. From 30 to 50 per cent. of cases of gastric disorder were primarily hypersecretions. As cases continue unrelieved, we find gastritis, gastric ulcer, gastralgia, pylorospasm, etc. The excess of acid secretion is found in a wide range with reference to quantity—from five

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to thirty times the normal—and in the degree of its total acidity, varying from 40 to 70 per cent.

Stubborn old cases, particularly if there is a history of frequent periodic or irregular exacerbations, are perhaps in 100 per cent. of cases due to an organic lesion which may or may not be located in the stomach, as gastric, or duodenal ulcer, biliary calculus, appendicitis, etc. Hence the wisdom of the broad clinical law always to apply the three-fold scheme of diagnosis to *old* cases and to give only the most guarded prognosis when the patient has not submitted to it. In point of results of treatment these are often among the most hopeful of cases, but the proper treatment may be surgical. Appendicular gastralgia is the best example of the latter. In the course of an intractable gastralgia attention is attracted to the appendix. Operation reveals a chronic inflammation and results in a perfect cure of the gastralgia. Earlier examination would have shown more or less tenderness, perhaps a history of vague pains, in the region of the appendix—a diagnostic point well worth bearing in mind.

The methods of treatment endorsed by different authorities are often widely at variance. There is, however, concurrence of opinion upon the following, which are basic in any rational dietetic or medical plan of treatment.

The carbohydrates and proteids call forth a plentiful secretion of HCl; but the former only does not unite with any of it, while the latter unites freely. Fats excite the flow of very little gastric juice, hence the superiority of a fatty proteid diet over one consisting chiefly of carbohydrates, in conditions of hyperacidity.

Pepsin is seldom absent from the gastric secretion. In the diseased stomach the administration of HCl before, during or after meals promotes the secretion of HCl and pepsin. This applies to cancer of the stomach, in which the acid is generally wanting. HCl added to the food, moreover, causes the stomach to empty itself more rapidly. Albumen in the form of a raw egg and soda will relieve the burning pain, but these are never curative.

In conclusion, a few points in the etiology of gastric diseases may be in order for the basal principles of treatment they suggest. It is the grossest folly to think we can restore with drugs what was lost through wrong living. There is one single need for taking food—to meet the demands of growth and waste in cell life—but we eat for two physiological reasons—to appease appetite, or taste, and to satisfy hunger. These are reciprocally helpful to each other.

Keenness of hunger and keenness of appetite are physiologically synonymous. Sharpness of appetite and hunger make for a vigorous cell life and a robust physique. Properly husbanded they constitute a therapeutic factor before which fresh air palls and without which fresh air fails of recuperative power.

The pleasures of the palate are ever the bountiful reward for meeting the demands of normal cell life—it is *luxury*. But in the ardor of our quest for the comforts of this luxury we fail utterly of realizing the *luxury of a great comfort*. The latter would give us health and competence. Instead, we choose disease and misery. This is Fletcherism, which is common sense applied to daily life.

Changing the Viewpoint as to Diet in Diabetes.

Thoughtful physicians have been increasingly dissatisfied with the dictum against sugar and starches in the routine handling of cases of diabetes mellitus. While our knowledge of the disease is admittedly defective, it is an empiric fact that many cases improve upon a non-carbohydrate regimen, while a smaller proportion develop unfavorable symptoms under great rigidity as to daily menu.

Very gradually are we coming to realize the rational application as well as the limitations of the conventional diabetic diet. The disease itself is also becoming better understood. Exceedingly uncommon in Oriental

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countries, yet the advances in social and business conditions in that section of the world are developing a prosperous and intellectual class of natives leading a sedentary life and no longer subsisting all but exclusively upon rice and other carbohydrates; and these people are contracting diabetes mellitus. The disease is definitely upon the increase in the United States, due, it is believed, to the stress, worry and nervous tension of maintaining financial and social status. Among the intellectual and prosperous classes, heredity has been proven a factor, Fitz and Joslin asserting that this was the primary determining factor in 23.8 per cent. of a series of cases reported by them. Add to this Bernard's demonstration that irritation of the floor of the fourth ventricle will produce temporary glycosuria and we have sufficient justification to conclude that faulty metabolism is, by no means, the sole pathology of the disease.

Glycosuria is necessarily due to either production of glucose in excess or to its under-consumption in the tissues, but that is more a manifestation of diabetes than the pathologic basis for this complicated disease. In other words, the elimination of sugar in the urine is a symptom rather than a disease. In this way of looking at the matter, we come to set bounds to the practice of dietetic rigidity as well as to define its necessity in certain cases.

In emphasizing heredity, social status, sedentary occupation, racial peculiarities, central nervous disturbances, etcetera, we must not forget the role of faulty metabolism, dietetic excesses, obesity and diseases of the pancreas and liver. Also it is well to remember that the critical period of life as regards diabetes is from the age of forty to sixty, and that this period corresponds with the sex decline and of vessel and tissue changes. It might be justified clinically to assert that there are distinct metabolic and equally distinct nervous (or psychic) cases of diabetes mellitus, although difficult to make a scientific demonstration thereof; and the question of diet varies with the type of the disease. Every case should be studied upon its own merits.

We fear that physicians have not differentiated sufficiently in the prescribing of diet for diabetes. All men of experience know that some cases prosper upon the conventional diet recommended for this disease, while others are not benefited or lose ground upon a rigid dietary. Especially is this latter result apt to occur in persons fairly advanced in years and who are of spare habit.

In estimating what should be the dietetic prescription in any given case, much information may be elicited by exhibiting upon an empty stomach one hundred grams of glucose mixed with some food such as bread. A meal of bread and butter with glucose syrup will serve the purpose. Then test the urine for the following two or three days. If little or no sugar is found in the urine or very little, if any, increase over that found before the glucose meal, the patient does not require extreme dietetic rigidity. Glucose syrup contains about 21 per cent. of water, and that must be estimated in determining the dose of the syrup. This test meal is not to be taken as absolutely diagnostic of the patient's ability to digest sugar or starch and to physiologically "warehouse" it, as the saying is used recently, but it is clinically indicative of conditions. The value of such tests must not be overestimated.

A good test of the value or harmfulness of any diet for diabetes mellitus is to frequently weigh the patient. It is better to have a little sugar appear than to weaken or debilitate the patient. After placing a diabetic upon the standard carbohydrate-free diet for one week and the excretion of sugar continues much as before, it results from the breaking down of tissue-albumins and the rigid carbohydrate-free diet will rapidly exhaust the sufferer and he will lose in weight.

A little discrimination upon the part of the physician will soon indicate a proper diet for any individual case, and it is possible to educate the tissues gradually so that they will properly appropriate a minimum

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of carbohydrate. In doing this it is well to remember that potatoes are less apt to give trouble than is bread. Most authorities agree that there is no occasion to restrict the consumption of water.

In calling attention to the mistake of invariably placing a diabetic upon the rigid carbohydrate-free diet, we do not wish to be extreme. There are many cases in which the rigid diet is essential. On the other hand, no one who has not suffered from the disease knows what a hardship this rigid diet becomes in time. There are cases in which it is cruelty to be too insistent, and there are others in which the life of the patient will be not only rendered uncomfortable, but will also be shortened. We call to mind several cases of patients who improved after they abandoned medical treatment and used their own judgment as to their diet or who changed physicians in favor of a less rigid dietician.

Toxicity of Quinine.

It has long been a mooted question whether quinine is capable of producing fatal toxic effects. There is a general concensus of opinion that it cannot, we fear. Acting upon this opinion, certain practicians, in notably malarial localities, prescribe not merely *heroic* doses, but *foolhardy* quantities. Hare, in his text-book on therapeutics, puts himself on record as holding to the opinion that quinine has a clean record as to fatalities.

This charitable view is all wrong. Like every other drug that may be depended upon to produce positive physiological effects, quinine is capable of excessive and even fatal effects, if ingested in sufficiently large quantities. Nor can the subject be passed by simply as a matter of idiosyncrasy. The latter cannot be denied as a potent factor in the production of unpleasant effects after the administration of full doses of quinine.

We hold to the view, however, that alimentary conditions expediting speedy absorption of large quantities of the drug are essential to a fatal issue from toxic doses. In THE MEDICAL COUNCIL for February, 1907, we reported a fatality following the ingestion of about 100 grains of quinine sulphate in the form of two-grain gelatine-coated pills, in a bouncing boy baby under three years of age. He had been crying for his milk and the mother sought to appease him with a *rattle* consisting of a mailing tube partly filled with the pills. He struck the tube on the floor and a moment later was gulping down pills.

Unconsciousness and convulsions promptly followed and, in spite of the emesis provoked, the child died within a few hours, to the utter consternation of the physicians standing by. They had not deemed such an issue possible. The first one appealed to in his office by the half frantic mother, bearing the babe on her arms within half an hour after the pills had been swallowed, was disposed to laugh down the mother's fear. And why should he not have done so? At that very moment the little fellow was exerting his very best to reach the tail of the office cat from the mother's arms! And she believed he had swallowed at most only several pills.

The foregoing case occurred here in Philadelphia. In a recent issue of *The Medical Times* is reported a fatality in an adult, taken from an English Coroner's Court records. A woman had taken twenty-five grains, and this produced congestion of the brain, liver and lungs. The other organs were healthy. The overdose induced paralysis of the heart.

Pointers

If your young hopeful (or yourself) *must* bang away on the Fourth, be a boy again and stay with him to see he don't hurt himself. The "safe and sane Fourth" fails to commend itself to Young America. Loosen up three or four dollars' worth, take the family to a picnic and set off the crackers where they will disturb only the silence of the wild.

When you go to Los Angeles to the American Medical, just whisper to your wife that cheap and really beautiful dress goods and other Japanese fabrics are to be had there that are either absent from or expensive in eastern stores.

Be a bit thoughtful of the hay-fever crank. Rag weed and golden rod have just made a good start. Weed them out of vacant lots you own before they bloom and get them cleared away from the paths and roadways.

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Original Articles

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Sentences, like sunbeams, burn deepest when most condensed.

Some of the Methods to Be Pursued in the Diagnosis of Diseases of the Rectum and Anus, as Viewed from the Standpoint of Their Practical Importance to the General Practitioner.

By Lewis H. Adler, Jr., M.D.,

Professor of Diseases of the Rectum, Philadelphia Polyclinic and College for Graduates in Medicine; formerly Preceptor to the Professor of Anatomy, Medical Department of the University of Pennsylvania; Consulting Surgeon, Charity Hospital; Secretary of the American Proctologic Society, etc., etc.,

In the language of Dr. Samuel T. Earle, of Baltimore, Md. (Diseases of the Anus, Rectum and Sigmoid, Lippincott Co., 1911, page 261), "The importance of a thorough examination of the anus, rectum and the sigmoid cannot be overestimated, and I would impress upon every general practitioner the advantages to be gained therefrom and the great reflection upon himself and the profession which follows this neglect whenever occasion requires.

"Unfortunately, it far too frequently happens that the case is sent to a specialist by the general practitioner with no examination at all, or one made in the most casual or unsatisfactory manner. It seems that there is as much, if not more, dislike for such examination on the part of the attending physician as on the part of the patient, his own diagnosis is accepted and a prescription given without any other examination. This practice cannot be too strongly condemned, as it is perfectly feasible for every physician to have a few necessary instruments, the most important being the index finger."

To this most excellent advice I would add that it is essential for the examiner to be familiar with the normal contour and condition of the parts to be examined, prior to his being able to recognize what is abnormal, and that the index finger when used may impart but little information unless it has the educated touch of knowledge and skill behind it. This can be obtained only by long experience and constant practice. Physicians have not infrequently appeared in my clinics apparently desirous of becoming rectal experts, who have reluctantly made a digital examination of a patient. It is needless to say that under such circumstances they can never learn the A, B, C of proctology, much less honestly pose as rectal experts. This statement would seem almost superfluous were it not for the oft-repeated experiences I have had with physicians examining persons afflicted with anal or rectal diseases, and the lack of tact and gentleness so often exercised in making the investigation. The region is an extremely sensitive one, and all patients suffering from ailments about these parts are specially prone to be distressed and are more or less nervous. Assent to a vaginal examination is much more readily obtained than consent to inspect the seat of rectal trouble. These facts, combined with the natural restraint experienced in making a first visit to a physician, should be realized by the examiner, and, in order to aid such persons to recover their composure, it is best to encourage them to give the history of their troubles somewhat in detail. While this consumes time, the important object is accomplished of securing the co-operation of the patient in the subsequent steps of the investigation, namely, the digital as well as, in some cases, the instrumental exploration of the bowel. These remarks are especially applicable to the treatment of females.

An illustration which emphasizes the foregoing remarks was an experience some time since with a physician from the West, who had occasion to consult me regarding some trouble about his rectum. Upon the second visit he remarked that he had frequently requested patients to mount his examining table for the purpose of exploring the rectum, but that it was not until he was obliged to go through the ordeal in my office (his first personal experience) that he fully realized and keenly appreciated the reason for the hesitancy that most patients exhibit in assenting to go through an investigation of this portion of their anatomy.

Physical Examination.

Having obtained the subjective symptoms —those given us by the patient—and being satisfied as to the existence of a rectal lesion, we proceed to make a thorough local examination of the anus and adjacent parts, including the rectum—without which no satisfactory diagnosis can be made and no positive information obtained upon which to make a prognosis or to guide the treatment.

Some authorities advise a patient to use an enema prior to a rectal examination.

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This I think is a mistake, so far as the first examination is concerned, as more reliable data is obtained when the bowel is in its usual condition. Under such circumstances the investigation will reveal the presence of pus, blood, mucus, or fecal matter, and its character, consistency, etc., if they be present; whereas, these substances may be removed, if an injection is used, and the condition causing them be overlooked. After the preliminary examination of the rectum an enema may be required, and should be used before the investigation is to be considered complete. Especially is such a course essential in an instrumental examination of the upper portion of the rectum and the sigmoid, when feces or other discharges are present.

Posture in Examination.

There are several positions in which the patient may be placed for a rectal examination, but for general use, I think that the most comfortable as well as the most delicate posture for the patient, and that most convenient for the examiner, is for the patient to lie on the left side on a firm couch, which has an extension of about four feet, the right shoulder turned away from the practitioner, the left arm brought behind the body, the right thigh only being well flexed upon the abdomen, and the left lower limb being kept perfectly straight. The buttocks should extend somewhat over the edge of the table, the uppermost being kept raised by the patient's right hand.

Several other positions, at times found useful, are the *exaggerated lithotomy position:* the patient on his back, legs flexed on thighs, thighs upon abdomen, and the pelvis raised; the *knee chest posture:* the patient on a table, resting upon his knees, which are separated as far as possible, the shoulders or chest lying upon the same level as the knees, the body well flexed upon the thighs; the *Hanes' posture,* suggested by Dr. Granville S. Hanes, of Louisville, Ky.: the patient on a specially devised table, or on a high table with his limbs extended, his body, head and arms hanging over the edge. Two chairs or stools placed upon either side of the patient may give support to his body by resting his arms or shoulders upon them; finally, in examining with the finger for stricture or a growth situated above the lower four inches of the bowel, the patient may assume a *squatting or stool posture* by being directed to stand on his feet in a position assumed in sitting, when, by straining, the diseased part is brought nearer the anus, so that at least an inch more of the bowel may be explored than in the usual position, even though direction has been given to bear down. This posture is also most useful in bringing into view prolapse, piles, and sometimes polypi.

Regarding illumination, either natural or artificial light may be employed. For ordinary purposes I prefer daylight. By means of a head-mirror, the examiner sitting facing the light and the patient's back to it, the light may be concentrated upon any particular place requiring observation.

Ocular Inspection.

Everything being in readiness for the examination, we proceed to inspect the condition of the external parts. On separating the buttocks, the orifice of the anus will come into view. Its shape should be carefully observed to ascertain whether it is abnormally narrowed or dilated, and whether the pigment of the surrounding skin is natural, increased or lessened. Eruptions of any kind—eczematous, syphilitic, parasitic, or otherwise—should be noticed.

In this connection, for the purpose of emphasizing the importance of a careful ocular observation, I shall relate an incident of a patient who came to me some years ago complaining of a marked pruritus ani. After what I thought had been a thorough inspection of the parts, and I was about to apply the usual treatment (when no discoverable local cause for its existence is manifest) I noticed a black speck at the root of one of the hairs. Upon further examination others were observed, which proved to be full-fledged pediculi.

External hemorrhoids, epitheliomata or condylomata will also be noted, if present. Palpation will enable us to detect any induration that exists, which may be due to a fistulous track or to an abscess. If the parts be covered with a discharge, it should be wiped away and its source traced to ascertain whether it be from an external opening of a fistulous tract, etc.

If the anal aperture be not abnormally contracted and the patient is requested to strain while the examiner stretches apart the anal outlet and repeats this process on opposite sides of the anus, a pretty good view of the anal canal may be obtained. In this manner internal hemorrhoids, ulcers and the internal openings of most fistulæ may be seen.

Digital Examination.

The next step is to make a digital ex-

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amination of the interior of the rectum. It is by this means that the most important information is to be gleaned, and it is a procedure that should never be omitted in any case of presumed rectal trouble. Such an investigation is not a very pleasant one, either to the patient or to the practitioner, yet without making it the physician needlessly sacrifices his reputation and risks possibly the patient's chance for the prolongation of life, by early surgical interference, as in cases of carcinoma.*

The method of making the examination is as follows: The nail of the index finger being well trimmed, and the finger lubricated with carbolized oil (5 per cent.), which I prefer to vaseline or similar substances, is introduced into the bowel by a slow, boring motion, in a direction at first slightly forward, and then backward, into the ampulla of the rectum. This should be done gradually, so as to allow the sphincters time to relax; if attempted too hurriedly or in too forcible a manner, spasm of the muscles will be induced. As the finger enters the anus, the condition of the sphincters should be noted. The strength, measured by the power of resistance, will be found to vary greatly in different persons. In the aged or debilitated it is apt to be very weak, and just the reverse in the strong and healthy. In persons of especially nervous tendency and in cases of irritable ulcer (fissure) of the anus, a contraction may be met with, which, owing to the pain occasioned by an attempted examination, will render it impossible without recourse to an anesthetic (local or otherwise). As the finger passes beyond the margin of the external sphincter, it should be swept around the anal canal in order to determine, if possible, the existence of any ulceration or other abnormal condition. It is just between the internal and the external sphincter muscles that the orifice of most of the internal openings of fistulæ is found, and it is at this point that the presence of small foreign bodies may be detected, which have lodged in the crypts or in the mucous membrane.

Here a word about internal hemorrhoids may not prove amiss. Their presence may be detected by a digital examination, but only when they are thickened by inflammatory changes. Otherwise it is impossible to recognize them by the sense of touch, and this is so in the majority of cases. Masses of hemorrhoids are frequently found upon ocular inspection after dilatation of the sphincters, the prior existence of which could not be ascertained by the tactile sense.

The finger should now be passed its full length into the bowel, unless prevented by some abnormal obstruction, such as stricture, etc. By instructing the patient to bear down forcibly, an additional one-half inch of the rectum can be explored. Another one-half inch may be gained by the surgeon pressing upward upon the perineum with the thumb over this region and the fingers of the examining hand kept extended and carried backward along the intergluteal groove. Usually an examination is made with the fingers closed in the palm and the soft parts are pushed upon by the knuckles. This procedure prevents the full passage of the index finger. In this manner about three and a half or four inches of the rectum may be explored, together with the prostate, the neck of the bladder, the uterus, the anterior surface of the coccyx, the lower part of the sacrum, the ovaries and tubes, and the broad ligament. With an exceptionally long finger it may be possible to feel the seminal vesicles and the vas deferens.

In making a rectal examination it must be borne in mind that very frequently two or more rectal diseases co-exist, for example, a polypoid growth complicating fissure, or malignant disease existing with a fistula and hemorrhoids. Malignant infiltration, or a benign stricture, can be readily detected if situated within reach. By sweeping the finger around the mucous membrane its general condition can be noted; a general laxity or smoothness of the normal folds indicating atony, and a harshness and dryness, some alteration in the normal secretions due in all probability to atrophy of the glands. Ulcerations, when not merely superficial, can be recognized by the induration around their edges. A polypus can be readily felt, but in examining for it it is important that the finger be brought from above downward, as otherwise the growth may be pushed out of reach, owing to the length of the pedicle, and its presence never detected owing to its smoothness and usual slimy condition. Fecal masses in the rectal

*It sometimes happens that a patient refuses to be examined. I recall the case of a woman who visited my office sometime since, and who not only refused permission for an examination, but freely expressed her surprise at my making the request. In part, this action was explained when she informed me that I was the fifteenth or sixteenth doctor she had consulted and that it was the first time that any such procedure had been suggested. I politely informed her that the investigation was particularly needful in her case and might be the means of preventing any further increase in the number of her medical advisers.

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pouch can be recognized without difficulty.

Before withdrawing the examining finger the coccyx should be grasped between the thumb and finger and moved backward and forward to determine its mobility and whether any tenderness exists.

Finally, upon the finger being withdrawn, several points may be gleaned by inspecting it. Should fecal matter have been encountered, some of it will probably adhere to the digit. Its color, consistency and odor may thus be determined. The presence of blood, mucus or pus in the rectum may be likewise ascertained. In carcinoma of the rectum the odor imparted to the finger is pathognomonic of the disease. No other malady with which I am familiar gives the same sickening feculent smell.

Rectal Eversion as a Means of Diagnosis.

In examining the rectum in females, Dr. H. R. Stover, of Boston, Mass., has recommended eversion of the bowel by the finger placed into the vagina. This method is useful in women who have borne children, but not in the young and unmarried. A portion of the anterior wall may thus be exposed.

The introduction of the hand into the rectum is a procedure which may be a means of exploration open to the surgeon, but I am inclined to view the amount of information obtainable by its use hardly sufficient to warrant the practice.

Instrumental Examination of the Rectum.

Unless a patient has a fissure-in-ano, or some other painful affection of the lower bowel, by reason of which much distress might be caused by attempting an instrumental examination, I would advise the routine use of this means of diagnosis in the majority of cases. Many varieties of specula are on the market, some of which are more ornamental than useful. Among the ordinary bivalve and tubular specula, which the general practitioner will find of use, may be mentioned that of Sim's (duckbill), Mathews' (bivalve), Tuttle's (conical fenestrated), Martin's, of Philadelphia (tubular), Bodenhamer's (bivalve), and Gant's (bivalve). Some of these instruments are better employed for the purpose of treatment than for diagnosis.

Over fifteen years ago Dr. Howard A. Kelly, of Baltimore, Md., introduced, at least, even though he did not devise, a set of rectal and sigmoidal straight tubes of different calibers and lengths designed to explore the parts under consideration. To this gentleman belongs the credit of impressing the profession with the importance of using this means of exploring a part of the economy which had long been regarded as practically *terra incognita*. Dr. James P. Tuttle, of New York City, subsequently devised a modification of Kelly's sigmoidoscope, in order to avoid the difficulty sometimes experienced in passing the straight instrument around the promotory of the sacrum. Tuttle's instrument is constructed by the introduction of a flexible obturator by which the sigmoidoscope is given a Mercier curve. By this means an inclined plane comes in contact with the promontory of the sacrum and glides over this point with less pain and more ease than the straight tube. Dr. Thomas Charles Martin, of Washington, D. C., has also made a useful modification of the Kelly tube by introducing certain grooves in the obturator of the instrument through which applications of medicaments may be made to the interior of the bowel. Dr. William M. Beach, of Pittsburg, Pa., has also improved the instrument by carrying an electric light through the same, upon the principle employed in the cystoscope.

Since the introduction of the pneumatic proctoscope, Kelly's instruments and their modifications have been but little used. This newer instrument, introduced about 1899, was devised at about the same time by two gentlemen working upon independent lines. Dr. J. R. Pennington, of Chicago, Ill., and Dr. William V. Laws, at the time a resident of Philadelphia, but now at Hot Springs, Va. The Laws' instrument, with which I am most familiar, consists of a set of three tubes, varying in caliber seven inches long, with a screw cap fitted with plate glass over its proximal ends; two electrodes run through the handle of the instrument, so as to connect a five-candle power electric light, which is placed a short distance from the end of and within the tube. Just in front of the glass cap there is a small opening in the tube so arranged that the rubber tubing of a double air-bulb may be attached. The instrument is furnished with an obturator. Each of the tubes has its proper-sized obturator and each tube fits the one-sized screw cap and the tips of the obturator set are all adjustable to one handle by being screwed to it. Before employing the instrument it should be warmed by placing it and the obturator in warm water. Care must be exercised not to get them too hot. With the obturator in place, the instrument is introduced into the rectum in

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the same manner and with the same precautions as advised for a digital examination. When it is passed as high as possible, without exerting any unnecessary force, the obturator is removed and the electric attachment is put in position; the glass cap, previously placed in hot water and now dried, is screwed on, and the rubber bulb is attached and the electric current turned on, and by gradually pumping in air the rectum and the sigmoid flexure may be inflated and the part thoroughly examined.

A necessary precaution to observe after finishing a rectal investigation by this method is to unscrew the cap, prior to removing the instrument, so as to permit as much as possible of the air which has been introduced to escape, as otherwise considerable distress may be occasioned by its remaining. Another point worthy of noting is the fact that, in some persons with a very relaxed or patulous anus, the air may escape alongside of the tube so that dilatation is impossible. This difficulty may be readily overcome by placing a ring of cotton, first wet and then dried, over the tube and against the anus, and having an assistant keep it in contact with the parts and close around the tube. Dr. James P. Tuttle has devised a modification of the Pennington-Laws' instrument, which is chiefly intended to prevent the annoying occurrence of having fecal matter, blood or other secretions flowing down over the end of the light and obscuring it. The electric lamp is fitted upon a long metallic stem and carried through a small cylindrical tube attached to the proctoscope which runs to the end of the instrument. A flint glass bulb at the distal end of the cylinder, through which the light runs, closes the end.

I have employed the Tuttle sigmoidoscope, made on the above principle, and have found it most satisfactory. Other instruments required in rectal diagnosis are probes of various lengths; one, which is often found useful, is a fine probe made of pure silver; a scoop or spoon, applicators, dressing forceps and blunt hooks. These latter are useful for the examination of the crypts, pockets, valves and internal blind fistulæ.

No mention has been made of bougies or sounds, as, since the introduction of the pneumatic sigmoidoscope and proctoscope, they are not essential for diagnostic purposes. When employed for the treatment of such troubles as stricture, impaction, etc., they must be used with extreme care. For giving high rectal enemata the ordinary Wales soft rubber rectal bougie is too soft, and Dr. Dwight H. Murray, of Syracuse, N. Y., has devised one which overcomes this objection and answers admirably the purpose for which it is intended.

1610 Arch street.

The Treatment of Erysipelas With Vaccines.

By G. H. Sherman, M.D.,
Detroit, Mich.

That erysipelas is caused by a streptococcus is now no longer questioned, but whether it is the same organism so commonly found in tonsillitis, bronchitis and other conditions, or a special strain, is not definitely settled. Its laboratory habits and microscopical appearance are the same as those of the ordinary streptococcus.

The clinical picture of erysipelas, however, is quite clear and cannot very well be mistaken for any other disease. Whether the difference of the character of the inflammation in erysipelas, where we have a diffused swelling, and other streptococcus invasions where the infective process runs along lymph channels, leaving red chains and involved lymphatic glands, is caused by an inherent difference in the germs, or simply because in the one case the connective tissue is involved, while in the other it follows the lymphatic channels, is not so easily determined.

In erysipelas we have intense and extensive inflammation, with comparatively infrequent pus formation. This is characteristic of streptococcus infections generally as compared with staphylococcus infections, and for this reason we should always be reluctant in using the knife in streptococcus invasions. Where the tissue succumbs to the germ activity it often takes on a distinct necrotic character, causing extensive sloughing, but not much pus.

Erysipelas being an acute infectious disease, often terminating fatally, should be gotten under control as soon as possible. For this purpose streptococcus vaccine, made from erysipelas strains, is unquestionally the most potent remedy at our command. In this connection the question of using autogenous vaccines naturally arises. To procure the streptococcus in erysipelas it is usually necessary to go beneath the skin, where the organism is found. This is most readily done by puncturing the skin with a

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narrow scalpel, then squeezing out blood and serum from the subcutaneous connective tissue. Cultures should be made on Loeffler's blood serum and incubated twenty-four hours. Almost invariably the staphylococcus albus will be found the predominating organism and often no streptococci are present. This is not because the staphylococcus is an important pathogenic factor, but as a consequence of the inflamed condition of the skin caused by the streptococcus, the staphylococcus, normally on the skin, multiplies very rapidly. I do not remember of ever having found streptococci in cultures made from blebs so often found in severe cases of erysipelas.

After twenty-four hours' growth, colonies of streptococci may readily be distinguished from the staphylococci, when subcultures should be made and again incubated for twenty-four hours. The resulting growth may then be used to make the vaccine by washing it off with normal salt solution, making a count of the suspension to determine the dosage and then sterilizing it at 140 degrees F. for thirty minutes in a water bath. Before using the vaccine it should be tested for sterility by inoculating culture tubes and incubating for two days. If growth should appear, the suspension should be resterilized and again tested for sterility.

Erysipelas being a rapidly progressing infectious disease, it can readily be seen that, if treatment is delayed until an autogenous vaccine can be made, the infection may have progressed so far that no treatment will be of any avail. Most of those who advise the use of autogenous vaccine in erysipelas recommend the use of stock vaccine until the autogenous can be made. From my experience I find that uniformly good results are obtained from stock vaccines, especially when used early in the course of the disease. I usually make my stock vaccine from cultures obtained in three or four cases of erysipelas and mixing them. The average dose that I have been employing is 20,000,000 for the adult and proportionally less for infants and children. Marked improvement with a reduction of temperature and a retarding of the inflammatory process is usually observed in twenty-four to thirty-six hours after the first inoculation. Where no material improvement takes place within one day after the first inoculation, the next dose should then be given. If the temperature comes down and then rises again, it is well to repeat the dose. In most cases two or three doses only are required. In extremely bad cases it is advisable to make inoculations twice a day until the case has been brought under control, and then at longer intervals.

My observations lead me to believe that cases of erysipelas treated with vaccine are not so liable to relapse as with other treatments. From over four years' experience with this method of treatment I cannot recall a case where there was a recurrence after a recovery. Not infrequently cases are met with where erysipelas takes on a subacute or chronic type. These cases are successfully treated by giving the vaccine at about five-day intervals.

Any one who is skeptical about the therapeutic value of these vaccines should use them in erysipelas and be convinced.

A Brief Study of the Immune Sera.

By Walter Rendtorff,
United States Government Indian Service,
Hayward, Wis.

Part II.

This subject is somewhat like a well in that the more one digs into it the deeper it gets. We will next consider the phenomena of hemolysis and bacteriolysis. In the days when blood transfusion was first practiced it was found that transfusion from a species foreign to the animal caused untoward symptoms, and, indeed, often proved fatal. Transfusion from the same or closely allied species produced no ill results. Upon experiment it was found that these ill effects were due to the solvent action of the foreign blood. For instance, the blood of a guinea pig injected with the defibrinated blood of a rabbit acquired the power to dissolve the red blood cells of the rabbit. This solvent action is, to a large extent, a specific one, that is, the blood of a guinea pig injected with rabbit's blood will dissolve only the red cells of the rabbit's blood and not the red blood cells of the horse, sheep, or other animal. Normal serum of some animals has the power to dissolve the blood cells of other species, rarely of more than one animal. A specific immune serum also sometimes dissolves the red blood cells of more than one animal.

Thus it is seen that the specificity of an immune serum is not absolute in all cases. Buchner concluded that the substance producing the solvent action, or hemolysis, was a living albumen. To this he gave the name of alexin. Later, however, Bordet demonstrated that specific hemolysis does not de-

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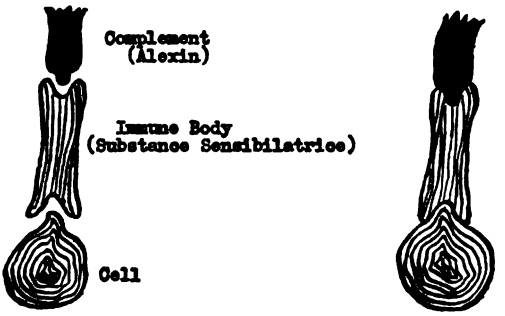
pend upon one substance alone, but upon the combined action of two substances. He showed that when a fresh hemolytic guinea pig serum was heated in a test tube to a temperature of 55 degrees C. it lost its hemolytic properties, that is, became inactive for rabbit's blood. However, upon the addition of a little serum from a normal guinea pig the previously hemolytic became reactivated—was again capable of producing solution of the blood cells of the rabbit. The conclusion to be drawn is this: that hemolysis depends upon the presence of two substances; one contained only in the specific serum and capable of withstanding heat to 55 degrees C.; the other contained not only in the specific serum but also in the serum of normal untreated animals. This latter is destroyed at a temperature of 55 degrees C. For it Bordet retained the name alexin, which was given originally by Buchner, as mentioned previously. The other substance, contained only in the specific sera and resisting heating to 55 degrees C., Bordet designated the substance sensibilatrice. Bordet thinks that this substance sensibilatrice acts as a sort of a mordant, making the cell sensitive to the action of the alexin, which then exercises a solvent action. In contradistinction to this is the belief of Ehrlich, who thinks that the action of these substances is a stereochemical one. Ehrlich names the substance sensibilatrice the amboceptor or immune body, and the alexin he calls the complement. These terms, immune body and complement, will be adhered to in further description.

So far we have spoken only of the phenomena of hemolysis. The phenomena of bacteriolysis are, however, so closely identical that the two can be considered together. Just as with hemolysis, the substance sensibilatrice of a bacteriolytic serum is specific, that is, for example, the serum of a guinea pig immunized against cholera will destroy only the cholera bacillus and not the typhoid bacillus or other organism. Just as with the hemolytic serum so also with the bacteriolytic serum, the solvent action depends upon two substances, complement and immune body.

As aforesaid, Bordet considered the immune body (his substance sensibilatrice) as essential in preparing the way for the solvent action of the complement (his alexin) upon the cell. Ehrlich was able to show experimentally that in the absence of the immune body no union indeed occurred between complement and cell. Thus it becomes clear that the immune body serves as an anchor between complement and cell. The immune body as an inter-body must therefore possess two binding units, one tying it to the cell (cytophile group), the other tying it to the complement (complementophile group). Reference to figure 1 will help in making my meaning clear.

Fig. 1



It has been demonstrated that in the production of immunity the complement of the normal blood has not increased. The immune body is, however, produced in great excess. Thus in using a specific immune serum, against cholera, let us say, we take it for granted that a sufficient amount of complement exists in the patient's blood. Unfortunately, this may not always be the case, nor have we any way of determining in what proportion the several substances are present. The use of the serum then has only introduced a larger amount of the immune body which will unite with what complement is present and in turn with the bacterial cell, thus tending to encompass its destruction. When in a given infectious disease the complement contained in the patient's blood is very deficient, immunization is of no avail, or at least can only be of slight benefit. Wasserman has suggested that the deficient complement be supplied. Undoubtedly the time will come when we will be able to judge by blood examination in just what proportion the several essential substances are present. It is no rebuke to the medical scientist to admit that a good many of the problems relating to the normal blood, immune sera, etc., are still in the dark. The advance, however, has been so rapid that we can well afford to be optimistic. The scientific research which has given us 606 may at any future period reveal things of even greater import to the human race.

To illustrate faulty relations between

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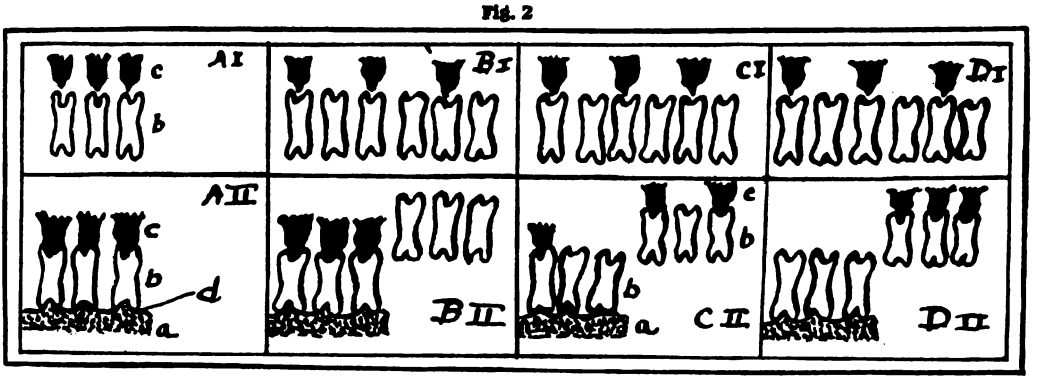
complement, immune body (inter-body) and cell, allow me to call your attention to figure 2. Here (a) in AII is a bacterial cell, possessing three receptors. Now, if we inject this bacterium into an animal a serum enplement is bound to the receptors. Here no immunity is produced.

Ehrlich has shown that all the specific relations which exist between toxin and antitoxin exist also between the immune

Fig. 2



sues which is rich in inter-bodies (b). If, now, interbodies, complement and cells are present in the same proportion, all affinities are satisfied and conditions prevail as shown in AII. All the complements have been joined to all cells and perfect immunity exists. Putting it more explicitly, the immune or inter-bodies have joined all the specific complements to all of the injurious bacterial cells, thus encompassing their destruction.

Now let it be understood that, so far as the effects are concerned, the injection of an excessive amount of immune sera is not dangerous to life. The therapeutic results of such an injection may, however, not be favorable. Let us look into the why and wherefore of this.

The injection of an excessive amount of immune sera introduces a large amount of inter-bodies. Now, three conditions may result from such an injection: The affinity of the inter-body for the receptorial may not change; may be increased; or, may be diminished. In the condition of unchanged affinity, CII, we still find the three receptors of the cell occupied by inter-bodies. Study will show, however, that this unchanged affinity between inter-body and receptor is without regard to the fact whether these inter-bodies are loaded with complement or not. In CII only one complement has been joined to the receptor, the other two remaining apart from the cell. These two complements cannot be active in producing immunity, as they do not act upon the cell. In BII a condition of increased affinity is shown. The condition is practically the same as in AII, only there is an excess of the inter-body. DII represents the condition of decreased affinity, in which no combody and the specific blood cell. Just as the anti-body of the diphtheria antitoxin fits certain receptors of the red cells, so the immune body possesses a haptophore group that fits certain receptors of the red cells. These last receptors he calls receptors of the third order.

I wish now to mention very briefly some other phenomena associated with this subject of bacteriolysis and hemolysis. We have considered the solvent action of some sera upon the red blood cell. It is entirely possible to prevent this hemolysis by the use of antihemolytic sera. Such a serum is readily produced by injecting an animal with very small doses of a hemolytic serum and gradually increasing the dose. The blood of an animal so treated will gradually develop a great resistance to hemolysis and will be enabled to protect other animals of its kind against hemolytic action. In like matter it is possible to develop sera containing anti-complements and anti-immune bodies.

In the light of what is to be it is essential that the physician have a rudimentary knowledge of the theories of the immune sera. Practically, however, we cannot look upon them at this time as fully developed agents. The immune sera now in actual use are, as yet, rather protective and not curative remedies. As I have already said, there is still much to be brought from darkness into light. Because this is the case, let us not adopt a sneering attitude and ridicule those things of which we know but little. Be assured that progress along these lines stands for the highest order of scientific development and does not rest upon guesswork and slip-shod experimentation.

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Gallstone Colic and Its Treatment.

By Dr. Samuel Floersheim, M.D.,
New York.

Gallstone colic is due to an attempted or actual passage of one or more gallstones from the gall bladder through the cystic and common bile ducts into the small intestine; to the passage of liver stones (when in the gall bladder they are called gallstones) through the hepatic and common bile ducts into the intestines, or through the hepatic and cystic ducts into the gall bladder; to the impaction and partial or complete occlusion of the cystic or common bile ducts by one or more gallstones.

Simulating gallstone colic we have acute indigestion*, perigastritis with adhesions about the lesser curvature and pyloric region, duodenal and pyloric ulcers, carcinoma of the pylorus and duodenum, pylorospasm, right diaphragmatic pleurisy, right-sided subphrenic abscess, growths within and without the common bile duct, nephritic colic, right-sided perinephritis and appendicitis.

Rationally speaking, the treatment of gallstone colic is surgical. There are a number of cases where the stones are small and pass readily through the ducts and into the bowel, the attack of colic produced by the passage of these small concretions being of longer or shorter duration, leaving little or no untoward effects. These cases refuse operation, and often rightly so. To the treatment of these cases I wish to direct attention.

In the sudden severe attack of colic, the most pleasant, satisfactory and rapid method of controlling the spasm and alleviating the suffering is by the administration of chloroform. One experienced in the treatment of renal and biliary colic soon acquires the ability to administer the minimum amount of chloroform to obtain the desired effect, and while the patient is under narcosis the attendant is frequently able to tell when the stones have passed. The changes noted are in the character of the pulse, respiration and general response of the system to the effect of further administration of chloroform. The anesthesia can then be immediately terminated, the patient soon returning to complete consciousness to find that relief has been obtained.

In contrast to this mode of procedure is the prevalent use by hyperdermic of large doses of morphine (with or without the addition of atropin) for the control of the pain. It is not so easy to control this form of treatment as the judicious use of chloroform. For instance, a hyperdermic of a large dose of morphine is given for a severe attack of colic, and per chance the biliary calculi has passed rapidly through the duct and dropped into the intestines, in which case the spasms would cease of themselves; the action of the sedative injected would then be unnecessary. The dose of morphine administered during the spasmodic attack would in the quiescent state be much too large, and in order to avoid anxious hours and the deleterious effects of the drug, remedial agents must be immediately and energetically instituted. To obviate the untoward effects of this drug when once injected in large amounts is often difficult, and for that reason chloroform should be the method of choice. Ethyl chloride has been used in place of chloroform, but from a limited experience I believe chloroform is more efficacious.

Should the attendant believe that the spasms are not of sufficient intensity to demand the use of the hypodermic needle or the administration of chloroform, relief may be given the patient by prescribing the following pill:

Aloin, 0.010 (gr. 1-6).
Extr. bell., 0.0060 (gr. 1-10).
Calomel, 0.020 (gr. 1-3).
Extr. nux vom., 0.0060 (gr. 1-10).
Sulph. morph., 0.0060 (gr. 1-10).
M. ft. pil. No. 1.
Sig.: One pill every one and a half to three hours, as is necessary.

Moist heat in the form of flaxseed poultices or hot moist compresses, to the upper right quadrant give the patient much comfort. After the acute attack has passed, a bland diet, such as diluted milk, white of egg, thin cereals, mashed potatoes, jellies, etc., should be ordered. Further treatment should consist of efforts to prevent recurring attacks.

808 Lexington avenue.

*A misnomer for a multitude of bona fide clinical entities.

Let the women have it out with themselves without too many suggestions from you. Hot weather will put the "kibosh" upon the hobble and pantaloon (one leg) skirt and nature will do the rest. A high hat and a "boiled shirt" in July are more foolish than any style the ladies are apt to adopt.

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LARYNGEAL TUBERCULOSIS.

Treated by Trichloracetic Acid and Intratracheal Injections.

By Dr. D. I. Giarth,
Ford City, Pa.

Mrs. J. G. B., aged 21 years; married one year in July, 1910. I was called to her home to relieve the dysphagia cough and loss of voice. Patient gave the following history:

For one year previous had developed cough, had weak throat and loss of voice for singing. About three months previous to my first visit had developed increased cough, sore throat and dysphonia, with painful deglutition, varying in severity from time to time, with but little benefit from medicine or local treatment. Had developed anorexia and nausea following the coughing paroxysm, and emaciation by reason of inability to swallow food. The expectoration frothy, at times purulent, with inability to sleep in the recumbent position by reason of the increased cough. Afternoons, fever and rapid pulse, which, at the time of my first visit were 102 and 120; weight 95 pounds; night sweats, followed by prostration in the morning.

Examination of the throat by laryingoscopic inspection revealed two typical ulcerations over the right arytenoid cartilage and swelling about the arytenoid prominences, inflammation at the base of the epiglottis and grayish color on the tracheal surface of the epiglottis, with lymph deposit covering the surrounding surface of the pharynx. The thickening due to the infiltration of the submucous tissue covered the larynx and superior tracheal surface, characterizing the second stage of the disease and leading to the narrowing of the lumen of the glottis.

Inspection of the nasal orifices showed narrowing of both nasal chambers. Inspection of chest showed involvement of both apices and trachea, which was painful to percussion. Moist and crepitant rales on expiration; the other parts of the chest gave no marked clinical symptoms of being involved. The examination of the sputum by the State laboratory, in which no T. B. was found, but pus cells with streptococci were found, was made after two weeks of previous treatment.

The Diagnosis.

The diagnosis of the ulceration was by exclusion from syphilis, which has more clearly defined borders and is deeper than in tuberculosis. The pain in tuberculous ulceration, especially in swallowing, causes great suffering, while pain is not a prominent symptom in ulceration of syphilis. The voice of syphilis gives a hoarse sound, rather than aphonic or whispering character, which is the voice of T. B. ulceration, and which was very marked in my patient.

Before the ulceration of tuberculosis we have the characteristic gray infiltration about the epiglottis, which in appearance we consider the precursor of ulceration; all of which point to a phthisical condition. The floor of the tubercular ulcer is pale, granular, not deeply excavated. The temperature, pulse and inanition, with the subjective and objective symptoms of the larynx, trachea and pulmonary apices, afford us collateral evidences of the tubercular involvement; also the aphonic voice, starting out strong and becoming a toneless whisper, causing fatigue of the vocal cords, while in chronic laryngitis the voice is variable in degree of pitch, is influenced by use, rest and atmospheric conditions.

I quote from Levy, of New York, a paper on laryngeal tuberculosis, who summarizes as follows:

> It must be recognized that the differential diagnosis between syphilis and tuberculous ulceration of the larynx is at times extremely difficult especially when the former exists in tuberculous patients. Fetterhoff urges the early examination of the larynx in every case of suspected or actual tuberculosis. This would save much suffering and many lives. Pain is the most serious symptom, and it is probably due to this that the laity regard throat consumption as such a terrible disease.

Levy states that it is necessary to again impress upon the general profession the curability of laryngeal tuberculosis. It is specially important that the prognosis be determined by a careful study of the lesion in all its characteristics. Local treatment to be effective must be well selected both as to time of application and method of procedure.

The Treatment.

First, locally: The urgent symptom of painful deglutition, which at home was treated by use of a fine spray of chloretone and cocaine, 2 per cent. solution in water. My practice is to first commence with weak spraying, solution of borate of soda and peroxide of hydrogen, to remove the pus and lymph from the post-nasal pharynx and larynx, followed by 1 per cent. solution of cocaine and chloretone, preparing the throat for direct application to the ulcer of the

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20 per cent. solution of trichloracetic acid (not lactic acid, which I have discarded for the trichloracetic acid), direct to the ulcer by means of the cotton-wrapped applicator under illumination of the laryngoscopic mirror.

Lennox Brown maintains that currettement is not absolutely necessary in tubercular ulceration of the larynx. I have been for about two years using the trichloracetic acid to ulcerations of the septum and 1 per cent. solutions by atomizer to the nose and throat for ozena and atrophic rhinitis.

In the case under consideration I made daily applications, first, with 10 per cent., and after tolerance had been established 20 per cent., with the result that the ulcerations became cicatrized in about four weeks' treatment, by which time the painful deglutition had been relieved, the patient being able to swallow liquid or solid foods without pain, and the voice having made marked improvement, being able to continue conversation without fatigue. Aside from the general and hygienic treatment, this patient, as already stated, suffered greatly from the distressing cough, which was relieved by intratracheal injections, for which I used the following formula: menthol, 2 per cent.; camphor, 2 per cent.; oil of clove, 2 to 4 per cent. in benzoinol, of which I inject thirty to forty minims from the intratracheal syringe with the three-way perforated tip, directly into the trachea, entering the tip of the syringe between the vocal bands, with the tongue drawn forward. The patient is instructed to inspire deeply and slowly, receiving the medicine directly upon the membrane of the trachea, which, by means of the two lateral openings in the tip of the syringe, is deposited upon the side of the trachea, while that of the vertical opening deposits the medicine into the trachea and large bronchial tubes; this is followed by instructing the patient to take three deep respirations to insure the absorption of the fluid. This gives relief from cough for several hours. In this case I used it daily for about three weeks, and for home treatment the inhalation of camphor-menthol in iodine tincture, the vapors given off after placing the bottle in water and heating to the boiling point and inhaled through the nostrils, the object being to get the iodine absorption as an alterative, softening and liquefying the lymph, aided by the further act of deep breathing opening up the pulmonary air cells.

The intratracheal treatment, in conjunction with the local application of 10 per cent. solution trichloracetic acid to the ulceration, was followed by gratifying results, the distressing coughing paroxysms and expectoration subsiding with the return of the natural voice.

The General Treatment.

The indications for general treatment are for reconstruction and to counteract the specific infection which tends to diminish the chances for a cure, and which in this case was treated by strychnine and creosote; the diet being largely of milk and eggs; the weight at the present time being one hundred and thirty pounds, having increased from ninety-five pounds in six months; the patient being free from cough, chest pains, and the voice having acquired the normal resonance.

I wish to make a few remarks upon the treatment of laryngeal and tracheal inflammation by intratracheal medication—the clinical results of this method of local and direct treatment to the respiratory tract. The first and very important conclusion is the harmlessness of the method, as has been established by Drs. Barton, of the Bellevue Hospital, and Rice, of the New York Post-Graduate Hospital, under whom I learned to practice this method of treatment during my post-graduate course, 1896, at the Bellevue out-patient department, and since that time, to wit, 1901, there has been written a book by Dr. Henry Mendel, of Paris, on the treatment of tuberculosis and chronic respiratory affections by intratracheal injections. This book has been translated into English by La Rue D. Rockwell, M.D., of Union City, Pa., in 1901, it being published five years after being used in New York by Drs. Barton, Muhr and Rice. In this treatment the digestive tract is constantly spared, as the absorption of medicine is effected by the respiratory means. The medicine acts locally and internally, since they penetrate the organs of respiration without being more or less prevented by the digestive juices, and the action of the medicines is rapid and powerful on account of its direct internal absorption. The substances injected into the trachea, being volatile, act directly over the whole respiratory mucous membrane. By their diffusion they are absorbed, and by their elimination still influence the secretion from the respiratory organs, since they permeate the whole system by this means. There is, therefore, a double and intense action.

In the discussion Dr. McKee suggested the im-

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portance of intercepting the use of the vocal organs in the dysphonia by requiring the patient to avoid the use of the voice above a whisper in conversation, and the application of lactic acid to the ulceration as being the method generally used after curettement of the ulcer.

Dr. Cooley stated that the mortality of laryngeal tuberculosis depends upon the stage of disease at which the case comes under observation and treatment. No case ever recovers after the lungs have become extensively involved.

Dr. Giarth said, in response: "My preference is for the treatment of the tubercular ulceration with trichloracetic acid after the first application with a strong solution under cocaine by direct application with cotton applicator, followed by daily applications of 10 per cent. solution until cicatrization is effected. I have been able to get better and more rapid results by this method than by curettement and lactic acid treatment, having followed the advice of Dr. W. H. Fitzgerald, of Detroit, who is enthusiastic in the use of the remedy, and who states that numerous cases, in his hospital and in private practice, treated with strongly concentrated solutions of trichloracetic acid, prove to his satisfaction that we have in this remedy almost a specific for the treatment of the larynx, faucial tonsils and nasal pharynx by preventing infection and secondary hemorrhage, and enables the patient to swallow solid food without difficulty. All of which I have confirmed by my experience during the past two years. It is well to use the solution sparingly, although the only unpleasant symptom likely to arise is the slight stinging and dryness over the area treated. I prefer to use cocaine application in first treatment of this remedy. Weak solutions of 1 per cent., or less, sprayed to the nostrils and pharynx have a powerful disinfectant action in the odors of ozena and post-nasal catarrh. I consider that less harm is done by this remedy than by lactic acid or any of the other caustic applications."

A Cholera-Carrier—Diseases of Childhood.

By J. L. DE WOLFE, M.D.,
West Paspebiac, Quebec, Canada.

Some time ago, the curious case of "Typhoid Jane," reported in the press, came to my notice. This woman was a carrier and perennial producer of typhoid germs, and therefore, a grave menace to the public, if left at large. Lately, from a Montreal newspaper, I gathered the information that there was a human cholera-carrier at Grosse Isle, the Government Quarantine Station of the River St. Lawrence. Forthwith, I wrote to the medical superintendent of the station for confirmation or denial of the newspaper report. His answer, when received, confirmed the press account.

It will be remembered that last year there was an epidemic outbreak of cholera in Russia. In November last a Russian named Gottlieb Ziebe was taken off one of the boats running to Montreal and placed in quarantine at Grosse Isle as a cholera suspect. The reason for the suspicion has not been given me. Probably his arrival from an infected district, or the peculiar condition of his stools, aroused suspicion. The medical superintendent, writing on March 23d last, states that "the patient is physically in good health, having no symptoms whatever, but carries, however, germs of cholera." He further adds that "repeated bacteriological examinations have given positive results as to the presence of the cholera germ."

Four months and more have passed, under rigid supervision, since the danger-carrying condition of this Russian was discovered. It would appear that it is permanent, and that the man is doomed to perpetual isolation, far from kin and country. This case is interesting, but it is none the less full of menace and food for serious thought. Germ-carriers are probably few and far between, still it is possible that they are not so rare as one would imagine. A germ-carrier might exist in our midst for years and not infect others, if the opportunity and conditions for infection did not present themselves. Cases of "walking typhoid" show peculiar features, and are, in a way, related to those of the germ-carrier.

Who can say, positively, that the headache and malaria of "walking typhoid" may not cease and the disease develop no further? Who can say that the germs becoming immune in their own human habitation, may not remain, and become a source of danger to the habitations of others unimmune to attack? Is it not possible; in fact, is it not in evidence, that, after recovery from a germ-caused disease, the patient may carry for an indefinite time potent germs for outside evil-doing, although these same germs are powerless for further ill-effect to the patient himself? Have we never faced mysterious outbreaks of infectious maladies whose origin was obscure or unaccountable?

Related to the foregoing words is the subject of the ever-occurring infectious and contagious diseases of childhood. Year after year our children suffer from measles, scarlatina, mumps, whooping-cough, diphtheria (the last not strictly a child's disease, still its most frequent victim). Why? Where is the starting point? In town and country, by lake-side, sea and

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river, through hill and dale, year by year our children develop one or more of these diseases. Why? Neither climate nor changes of climate can cause scarlatina, measles, etc. A country village with its sparse population breathing pure air escapes not the swinging cycle of children's diseases any more than the town, with its crowded alleys. Death gathers its helpless little victims each year from every town and village. We give our dear ones to the Destroyer and hypocritically and falsely exclaim—"God's will be done"! It's the Devil's will that has been done, through our passive co-operation, through our unintelligent criminal inactivity.

In all communities of people there should be an efficient sanitary officer, vested with absolute authority for the control and prevention of disease. It (the authority) should be a one-man power. He should be free from interference by municipal lay governance. His work should be judged and inspected, when necessary, by a chief county sanitary inspector, whose sole work should be to supervise the labors of his sub-officers. These community sanitary officers should devote their whole time to the control and prevention of disease, and not engage in the ordinary practice of their profession.

If the conditions briefly sketched above were inaugurated the infectious diseases of childhood, with their annual tale of sickness and ever-recurring toll of death, would become a thing of the past.

From Centigrade to Fahrenheiit.

The common thermometer system we use to tell how hot it is is the Fahrenheit; the scientific method is the centigrade, which is on a decimal basis. Occasionally medical or engineering directions are given in centigrade, and it is then well to know how to turn this into the system by which our own thermometers are made.

The easiest method is to multiply the centigrade temperature by 2, deduct 1-10 of the product and add 32. Thus, 30 degrees centigrade multiplied by 2 equals 60; minus 1-10 of 60, or 6, equals 54; plus 32 equals 86, the Fahrenheit temperature. This is a method simple and good to know in an emergency.

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Should Venereal Diseases Be Reported?

TO THE MEDICAL COUNCIL:

I presume that I am somewhat old-fashioned in some of my ideas in regard to matters medical and hygienic, but my early years date so far back that I have a right to be at least conservative, and what is more, I am neither ashamed nor sorry for being slow to adopt new ideas before they have been properly tested and found worthy of being adopted. Many fads come up in a night, like Jonah's gourd, and flourish for a brief season, but when the sunshine of publicity and experience falls upon them they melt away like the morning dew. The infallible cures of cancer and tuberculosis, from cundurango to creosote, would fill a book, until we become skeptical, and now we say, "I'm from Missouri; show me!"

Not long since I attended a meeting of a medical society where the topic of the evening was "Prostitution: How to Prevent It." The leading paper dealt with the subject chiefly as observed in Europe, but more especially in Germany. The methods of reporting, licensing, examinations of women, segregation, treatment, etc., were very fully set forth; but it appeared that after all these odious performances the social evil was by no means suppressed, if at all lessened or diminished. Indeed, it was admitted that in Berlin, where some 5,000 prostitutes are under official observation or espionage, there are not less than 45,000 that are beyond reach of regulation, and that Berlin contains more prostitutes to the square block than Paris, London, or any other city in the civilized world. Although it was not the trend of the paper read, the inevitable conclusion was that prostitution has not yet been appreciably checked by all the machinery of stringent laws perfunctorily enforced.

After some weak discussion one enthusiast voiced his conclusion that *the* one remedy lay in what he termed *"Reporting all venereal diseases."* Following out this literally, it must applv to both men and women.

The gist of the argument was that as physicians are required to report to the health authorities all cases of smallpox, diphtheria, scarlet fever, measles, whooping cough, etc., and that as gonorrhea and syphilis are more and more destructive than these, therefore venereal diseases should likewise be reported. A resolution was offered, "that it is the sense of this society that venereal diseases should in the same

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manner be reported, and that the Board of Health be requested to pass an ordinance to this effect."

When the vote was taken a faint half dozen "yeas" were heard, while three-score doctors sat silent—*nem contra dicente*—perhaps out of regard for the one presenting the resolution, or not having the moral courage to voice their actual convictions.

I should say here that I was not a member of that society, otherwise there would have been one emphatic "No!"

Now, there is not complete analogy between the contagious eruptive diseases and the very properly so-called *private* diseases. The former involves no disgrace, and are unavoidable in the very nature of things; the latter are unpleasantly suggestive of moral delinquency and are humiliating, even when not contracted in illicit intercourse.

Let us follow up this reporting business. Assume that physicians be required to report all venereal diseases. How shall the report be made? Presumably on specially prepared cards, as is now done with contagious diseases, including tuberculosis, stating name, age, residence, disease, duration, *how contracted,* and such other particulars as shall be deemed essential for a full understanding of the case; the card to be sent by mail to the Department of Health. It might be well to caution postal employees and others *not to read these cards.*

In the natural course of things these cards will be placed in a card index, so as to be readily consulted, or possibly the contents entered in a book for ready reference and general information. Is this information to be kept secret, or is the book to be open for public inspection? Such valuable statistics deserve to be entered on India paper and bound in calf, for they would be more entertaining reading than the new Encyclopedia Britannica.

But the succedenta of reporting endeth not here. In diphtheria, scarlet fever, etc., an inspector visits the house and looks into the condition of things, and as these venereal diseases are to be treated in the same manner as the eruptive diseases, a warning notice must be tacked on the infected house for the protection of the innocent public.

"GONORRHEA HERE!" "SYPHILIS WITHIN!" Or, to be more specific, "Tom Jones has Gonorrhea!" "Sally Sweet has Syphilis!" *"Beware!"*

Still further, this notice must remain until the patient has either recovered or died, the premises fumigated, and shirts, drawers, pantaloons and petticoats duly disinfected and a clean bill of health secured, the patient being released from quarantine and allowed to again associate with his or her fellows.

On the score of delicacy, it would seem proper that a certain proportion of the inspectors should be women.

It may be said that no one contemplates going to any such extremes in this matter. Even so, anything short of this or less than this would render the whole reporting business more farcical than a farce, and be of not the least possible avail in its avowed purpose of checking prostitution and banishing venereal diseases.

And surely it would be invidious and utterly useless to report women as affected and leave rotten men abroad to contaminate and work their sweet will at their pleasure.

Nice questions of diagnosis might arise. Must gonorrhea, for instance, be reported in the several *stages*—acute, sub-acute, chronic—specifying gleet or the "morning drop?"

In syphilis, must it be reported as of the primary, secondary or the tertiary stage—twenty years, perhaps, after the chancre—when possibly the only evidence of the disease shows in the affected offspring? Who can draw the line of exact demarcation?

Assuming, further, that such requirement be strictly enforced, in view of necessary publicity, no one but a natural born fool would ever consult a regular physician for the treatment of venereal disease. Doctors would have no more of this kind of practice, as it would all go where already too much of it goes—into the hands of advertising quacks (see daily papers and water closets) and notorious druggists, ill-famed for treating such diseases (on the sly), having access to old Dr. Clapp's favorite prescription, and claiming to cure cheaply—*tuto cito et jucunde.*

As things now are the unfortunate may consult the physician *in confidence,* with the certain assurance that their ailments, weaknesses and even moral lapses of whatever kind will never be revealed to any one. This confidential relation between physician and patient can never be disturbed without causing great harm. It is easy to see how unwarrantable meddling with venereal diseases would increase the array of half-cured cases, with strictures, buboes, sterility and ovarian disease, and open wide the gates for the ravages and horrors of later syphilis.

BENJ. EDSON, M.D.
83 St. Mark's avenue, Brooklyn, N. Y.

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Tuberculosis and Fresh Air.

By M. B. TULLER, M.D.,
Crawford, Ky.

Basing by deductions on observations of the disease as it occurs in this section of the country, I am forced to the conclusion that a very erroneous impression is being given the public as to the value of this method of treatment. Our people here live almost entirely outdoors practically nine months in the year, and not less than half outdoors during the remaining three months, and, as there is nearly always a mountain breeze, frequently amounting to a gale, there is no lack of fresh air, and the people inhale a superabundance of the nearly 21 per cent. of oxygen supplied by nature, and yet they develop tuberculosis and die, and the disease is slowly, though spasmodically, on the increase in this section.

It has been my fortune recently to have in my care seven cases of incipient tuberculosis. Of these, three were abdominal and pulmonary, two were abdominal only, one was glandular and pulmonary, and one was in the ankle joint. Two others are exciting my suspicion, but I have not yet reached a definite decision in regard to them. Two more are well advanced in the disease; one—a woman—has both abdominal and pulmonary tuberculosis, and the other—a man—has acute pulmonary tuberculosis. Both will, in the course of time, die. All of these people lived very largely outdoors all of their lives, and continued to live, more or less in the open air after their sickness began, though guardedly so after I began treating them. The seven incipient cases are slowly and steadily improving under my idea of judicious treatment, absolute rest, light feeding of a concentrated nourishing diet, and will recover for a longer or shorter period of time. Recurrence, however, is probable, with a fatal issue sooner or later.

From observation and deduction I am forced to the following conclusions:

First.—That tuberculosis is primarily an intoxication, probably both auto and hetero, the auto possibly predominating.

Second.—That as long as the body content of carbon is only that which is normal in amount, and which is being normally eliminated, no tuberculosis can develop.

Third.—That the fresh air is useful in this disease to the extent that it is useful in health—it decarbonizes the blood, and its ability to do so is limited to the area of inhalation and exhalation.

Fourth.—That if oxygen or fresh air destroys the bacillus, it cannot reach the tissues in a state to multiply itself; hence, no harm from their invasion can result.

Fifth.—That when the body content of carbon is in excess, and decarbonization or other elimination is imperfectly performed, the bacillus is developed from the intoxication of the tissues, and not from invasion by the germ.

Sixth.—That the inhalation of dried pus particles from tubercular patients is intoxicating to the tissues, and, by absorption, to the blood stream, and added to the internal intoxication is contributive to the development of the disease.

What is my idea of judicious treatment? Briefly, inhibit the toxemia, promote elimination, absolute rest in bed until the patient is much improved, then gentle exercise until he is well. Support of the strength, not by overloading an already overtaxed alimentary canal, but by frequent feeding of small quantities of nourishing food.

The drugs used are calomel, mercury and chalk, combined sulpho-carbolates, a combination of salol and sulphur, bryonia, triple arsenites with nuclein, syrup of hypophosphites comp., all according to their indications.

One other point I wish to make is that any drug which will increase the red blood corpuscles will be apt to be of great benefit to the patient. Leucocytosis is of less importance. If there are plenty of red blood corpuscles to carry oxygen and rich food to the diseased or poisoned tissues, the normal leucocytes will attend to their part of the work.

We publish this communication because we believe that many others, like our correspondent in Kentucky, have been disappointed with the results generally attained by the so-called "fresh-air treatment" of tuberculosis. We think this is too often true, though probably not so much due to the lack of value of the fresh-air treatment as to the lack of careful personal and community hygiene. Patients generally require not only minute instruction as to personal hygiene, but careful and *frequent* inquiry and observation to be sure that instruction is carried out. In other words, the fresh-

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air treatment alone is not effective unless accompanied by the strictest aseptic hygiene, rational nourishment and the indicated medicinal treatment.

In spite of detailed instruction by the physician in charge, one of the most prolific sources of reinfection to the tuberculous patient is the pocket handkerchief. He carries about with him for several days at a time a pocket handkerchief which cannot but be reeking with tubercle bacilli, for even if he does not expectorate into it, he wipes his mouth and nose with it, and this handkerchief may be passed from one pocket to another and distribute its contagion. It may also be (and often is) frequently used to wipe the mouths and noses of some of the children in the family, and this person still further spread the contagion.

Another source (and a very common one in spite of our supposed public enlightenment on this subject) is the family drinking cup or glass in the bathroom, which the tuberculous one very often uses, as well as the rest of the family.

And again—and this is an *extremely common* practice (*and an extremely dirty one*)—among people who are otherwise well educated and think they are clean; many bathrooms have an arrangement of wire or metal for holding the family tooth brushes in which the brushes are brought very close together, and more often the bristles of adjoining brushes are in absolute contact. Frequently the family tooth brushes are all placed in a glass receptacle, with nothing to keep them from resting against each other. Aside from the possibility of distributing a definite disease, such as tuberculosis, it is a dirty habit.

When a case of tuberculosis is discovered, the entire house should be thoroughly disinfected and the patient instructed very minutely as to his personal and community hygiene; he should have his own toilet articles and keep them in his room and *not* in the *family bathroom;* he should *not* use the *family wash basin* or *tub;* or if he does use the tub it should be disinfected after him; he should have his separate dishes for meals, and these should be boiled after each use; he should use paper napkins at the table in place of the ordinary linen napkin, so that they may be burned; he should use paper napkins for handkerchiefs and to expectorate in, and should carry a paper bag in his pocket to keep these in until they can be burned; he should be careful not to contaminate his hands, and if he does should disinfect them at once. If expectoration is profuse he should use paper cups, which can be conveniently carried in his pocket. He should, at all times carry a plentiful supply of paper handkerchiefs or napkins, and should hold one before his mouth while coughing, so as not to scatter the germs. A handkerchief should never be used but once.

Add to this the proper medication, diet, rest, and exercise for the individual case, *plus* the "fresh-air treatment," and it seems to us, if the case is diagnosed fairly early, the result should be a cure. Of course, if the case is far advanced before being discovered, it should be removed to a tuberculosis sanitarium, if possible, in order to protect the others in the household, the house *thoroughly disinfected,* and a thorough examination made of the rest of the occupants of the house.

The "Draught Delusion" Again.

EDITOR MEDICAL COUNCIL:

In the May COUNCIL I find a letter from Dr. J. Leverett, who intimates that my version of the draught delusion, published in the April number, was made up of mere statements without any proof to uphold the assertion that draughts are not etiological factors of disease.

Having read and reread Dr. Leverett's letter, I am unable to find any proof therein that draughts cause even "myalgia or lumbago"; he takes up your space to tell us they do. Mind, I say he *tells* us draughts are harmful at times—he gives no proof. I think the doctor must be very reckless to expose himself all the time, as he describes, if he considers draughts harmful.

The question of draughts as disease factors is at present insusceptible of proof, one way or another. It is like the question of the efficacy of vaccination against smallpox; no one *knows* positively about it, but

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we merely form opinions from clinical observation and statistics.

Dr. Leverett remarks that he thinks there will be no misunderstanding when he employs the unscientific term "a cold" in the sense of catching cold. I agree with him that there will not—among grandaunts and practical nurses of long experience, but I submit that the phrase is quite meaningless among trained physicians.

If there are cases of "inflammation without germs" to be met in clinical work, I should appreciate any enlightenment Dr. Leverett can give us about them. I am unaware of any such occurrences at present. Whatever our forefathers thought about draughts and "colds," I believe I am by no means alone when I say that you can't "catch cold" unless you *catch* the pathogenic germ that causes it.

Coryza or acute rhinitis may be due to the pneumococcus, the micrococcus catarrhalis, the influenza bacillus, the diphtheria bacillus or other bacteria. If it may depend on non-bacterial factors, the burden of proof rests on Dr. Leverett.

WILLIAM BRADY, M.D.
1008 Lake street, Elmira, N. Y.

Swamp Fever.

TO THE MEDICAL COUNCIL:

As we know, pernicious malaria is divided into four forms: algid, comatose, hemorrhagic and dysenteric, all of which are common diseases where I live, especially the hematuria or swamp fever. This is a disease very much to be dreaded—more on account of its complications, the chief of which is the congestion of all the internal organs, followed by a complete suppression of urine. Congestion almost invariably causes death if it comes on after severe hemorrhages, when the patient is very anemic and weak.

Regarding the etiology and pathology, I shall have very little to say, save that it is caused by the growth and multiplication of the estivo-autumnal parasite, causing a breaking down of the red-blood cells. The kidneys become congested, shedding the epithelial lining of the tubules, thereby impairing their functions of filtration and elimination; the liver and spleen become enormously enlarged and tender, with all other pathological changes associated with chronic malaria.

Symptoms.

Tongue heavily coated, skin and eyes very yellow, patient has an anemic appearance, even before chill. Generally begins with a severe chill or rigor, lasting from two to six hours, followed by high temperature—from 104 to 106 or 107. The surface of the body is moist and cold with perspiration, which has a characteristic odor and stains the clothes a yellow, bile-like color. Pulse ranges from 175 to 200. Vomiting begins with chill and is generally excessive and hard to control, consisting mostly of bile, sometimes only of a dark, almost black, substance; face has a pinched, anxious expression. Hemorrhage begins before chill stops, and increases in severity with each hemorrhage, which varies from an ounce to a half pint every 20 or 30 minutes. Hemorrhage often comes from both the bowels (dysenteric form) and kidneys, and is far more serious than when only from the kidneys.

Treatment.

First quiet the patient with hypo. of morphine and atropine, wrap patient in hot blanket from head to foot, and apply ice-cap to head and neck. *A large blister over the liver.*

The one indication above all else is free elimination by heroic doses of calomel, 40 to 60 grains every two hours; to this I add ½ to 1 grain podophyllum; after giving about three doses like this, follow with a large dose of sulphate of magnesia. Give 15 to 30 drops of turpentine, or a corresponding dose of adrenalin chloride every two hours until the hemorrhage begins to check. Encourage the patient to drink a large amount of water, either hot or cold, as they can best retain. Another agent I invariably resort to is high colonic saline anemas. Allow these to pass in slowly so as to be absorbed, and if kidneys still fail to act freely and suppression threatens give 5 to 10 grain dose of diuretin, or spartine sulph., grs. 2 to 3 by hypo. every three hours, and no longer depend on the saline anemas, but resort to hypodermoclysis, and support patient with large doses of strychnine and digitalis, or, best, digitalin.

I never give quinine unless the patient has a second chill and congestion threatens, and if compelled to do so I give the hydrochlorate with urea, hypodermatically, in large doses—for you can see the irritating effect of the quinine on the kidneys in an hour's time after first dose—and I believe, as a rule, quinine does no good towards killing out the malaria, as the plasmodia are all broken down and decomposed when hemorrhage begins.

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Illustrative Case.

I will report one case to which I gave quinine: E. L., white male, age 16, was taken with severe chill about 9.30, October 30, lasting about 5 or 6 hours. About 10.30 the hemorrhage began; he passed about half pint of dark, almost black, urine; actions continued about every thirty minutes, for two or three hours, when the same hemorrhage started from the bowels. I saw him late in the afternoon; he was the most yellowed person I ever saw; temperature, 105; pulse, 175 to 180; surface cold and moist with perspiration; vomiting every few minutes, and he was in a semi-conscious condition.

I began the treatment outlined above, and by next day he was much improved. This was November 1. On November 2 he had another severe chill, but hemorrhage continued to improve. Being afraid of the third chill, I began bisulph. of quinine, gr. 10, about 12 M. Before 6 P. M. hemorrhages returned worse than at first. I stopped all the quinine and used a proprietary fever syrup to keep off the chills, which it did, and he began to improve and was up in about ten days or two weeks, but very anemic. I cite the case only to show my experience with quinine in treatment of hematuria or swamp fever.

I have never seen or heard of but two cases of hematuria in a negro; whether they are immune or not I cannot say.

J. S. Eason, M.D.

Coldwater, Miss.

India Ink for Illustrations.

We invite and urge authors to send suitable photographs or drawings of illustrations to elucidate their articles. We will make the necessary plates at our expense and after publication will send the original plates to the authors, so that they may have them for any desired future use.

Good clean photographs are best, but if drawings are made instead they must be made with India ink, as drawings made in pencil or with ordinary ink must be redrawn in India ink before they can be reproduced.

A Sleep Inducer.

An English doctor has invented what he calls a "spectascope," to put people to sleep. It is not a sermon, but a little apparatus somewhat like a pair of goggles, which you put on over your eyes. Just in front of each eye is a small white spot in the middle of a black disk; the sight is concentrated on the white spot and drowsiness is soon induced.

Some Side Lights in the Optical World.

By Finis L. Anderson, M.D.,
Century Bldg., Kansas City, Mo.

During the past ten years it has, to the writer, been interesting to observe the attitude taken by that class of men who style themselves "Eyesight Specialists," "Eye Specialists," "Optometrists," "Doctors of Optics," "Graduate Opticians," etc.

It has been still more interesting to observe so many otherwise well-informed, and often highly-qualified physicians, taking in these semi-professional men, or rather pseudo-professional men, and going so far, in many instances, as to permit the use of their names to be associated with them, and even printed in blazing letters in the daily papers; furnishing them office rent free, and otherwise assisting them to further cripple the medical profession. In one instance, in one of the best county seat towns in Missouri, I counted three or four names of leading physicians, one of them an officer in the County Medical Society, giving his unqualified endorsement to Dr. Blank's *Superior* lenses!

Now, it is well known that the optical man, aside from the manufacturer and the ordinary retail jeweler, is greatly opposed to the use of drugs in the eyes; hence he is a natural enemy to the medical man.

The thought that inspired the writing of this article, however, was an item I noticed, not long ago, in one of the leading optical journals, which went on to say that just as long as the optician could keep the occulist inside the medical society, just that long they were safe; for, the article explained, they could educate a thousand people in the newspapers to their way of believing, that is, opposing mydriatics, etc., while the oculists could only "chew the rag" among themselves and a few sympathizing medical men, while the public in general were none the wiser. I wonder how much truth was in that statement.

Recognizing the indifference of the general practician and the want of information on the part of the public, caused the writer, about ten years ago, to publish a circular letter, explaining briefly the difference between an oculist and an optician, and these letters were used to a good advantage, and to my great surprise I received many letters and many 'phone messages from intelligent people—good friends, of course—telling me that they had always thought that Dr. Eye-

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sight-specialist was a sure enough *bona fide* doctor, honestly been believing that an eye doctor, oculist or ophthalmologist, and optician or optometrist, meant the same, and thought the optical doctors were equally able to intelligently and safely examine the eyes and give such glasses and such treatment as might be needed. I have never heard of an optician telling the people different. This circular letter, however, was not in keeping with orthodox ethical medicine, and therefore, no doubt, put me in a "bad light" with some of the more esthetic of the profession, so that I finally ceased to use them, not wishing to offend in the least any one.

The following is the substance of the letter that I used to good effect, but doing so alone, and, as stated, sometimes "under fire:"

The Letter.

"*Dear Sir:* In offering these suggestions to the public it is not my intention to cast reflection on any one, and especially do I wish to be understood as not criticising the manufacturing or jobbing optician, as he bears the same relation to the oculist that the legitimate druggist does to the physician.

"One particular point I wish to make is that many of the best educated people whom I know seem to not understand that there is any difference in the qualifications of an oculist and an optician. I often have people say to me, 'Oh, yes, you are the optician,' and on one occasion a college professor said to me, 'Dr. A., let me introduce you to Dr. B. who is *also* an optician.' I did not get offended, for I knew the professor was uninformed on that subject. To be fair, let us give the definition of the two words, oculist and optician, according to Webster or any good authority.

"Optician: One who *makes* eyeglasses, spectacles, and other optical instruments. In other words, he is, or should be, a *skilled mechanic*. Optometrist means practically the same.

"Oculist: One who is, or should be, familiar with the anatomy, physiology and diseases of the eye, and qualified to recognize and treat its diseases. In plain words, he must be a physician, doctor of medicine, and I will add, should be thoroughly qualified in optics. Ophthalmologist means about the same.

"Naturally, then, is it not for the oculist to examine and test the eyes and determine whether or not glasses are needed, and, if so, what kind, or whether it be a disease of the eye or some of the functions of the body causing the trouble

"Speaking plainly, yet truthfully, being a 'graduate optician,' 'graduate optometrist' or 'doctor of optics,' is not of much significance. Most any one can get one of these degrees at any of the so-called 'optical colleges' or 'schools of optometry,' and the tuition for such a course rarely exceeds twenty-five dollars and the time to qualify is ordinarily four weeks. Such degrees can also be had by a correspondence course.

"Many conditions of the eye are such that glasses would do harm, and yet apparently glasses are indicated.

"After the oculist has examined the eyes and has determined the kind of glasses needed, *then*, but not sooner, does he need the assistance of the optician, who will, if qualified, grind any kind of a lens, out of any kind of material, the doctor may order."

This is, briefly, the optical side of the oculist's part in refraction.

Reading between the lines in any optical journal will convince any up-to-date physician that what the oculist must do is to not only qualify himself in medicine, but optics, too, for the time has come when he is compelled to do so or be driven from the optical field entirely.

When the oculist takes a broader view of the situation and learns what the optician knows, and all he knows, then it is easy going, no need to fight the spectacle fitter, but learn to fit all cases possible *without* mydriatics. Don't forget that nearly 50 per cent. of the people in the United States are antagonistic to the medical profession, and many of them justly so; and by adding a reasonable amount of diplomacy along with plenty of qualifications will bring to the poor struggling oculist "his own."

If we could only get the busy doctor to refer his cases for refraction our way, instead of sending them to the optician, it would be a great help to us and a fair deal to his clientele.

The "Born" Doctor.

EDITOR MEDICAL COUNCIL:

A doctor residing in Geneva, Ill., writing of the "born" doctor, called to mind the fact of my personal acquaintance with one of "the seventh sons of the seventh son," who is credited with the title of doctor, having been born fully fledged and almost ready for general practice. As further evidence of the fact that he was born possessed of the faculty of an M.D., he did not have to attend lectures more than about three months, when he was fully equipped for practice and went at it "with shovel and tongs," working up quite a little practice.

My first opportunity of being honored with his acquaintance was in a consultation in which I was called—the case being his; the patient a perfect picture of health, and this was the event of the birth of her second child. With the first she experienced some delay and trouble, merely that found in almost every case of primipara confinement, nothing of a serious nature happening. Her recovery was all that could be desired.

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On account of her having had some little trouble with her first accouchement, he, the great son of the "seventh son," naturally concluded that she would have "a devil of a time" with this one, and proceeded to rush a messenger out, late in the night, after me to make the ride of ten miles, horseback, in the month of February, when the roads were at their worst and the weather very cold. I was asked to bring my instruments, forceps, etc., that he had a very bad case. Upon my arrival I found everybody quiet, and the patient especially so. I made an examination, and to my surprise found the presentation perfectly normal, and that she was just entering the first stage of labor. I suggested that we all retire; that there would not be any need for our services until morning; which we did. After partaking of a good country breakfast, and when nature seemed to know that all hands were ready for the job, the patient began to show signs of real labor. The doctor asked me to take charge of the case, which I did; and in less than an hour the child was born without the least trouble. After the child was given to the nurse I asked the doctor whether I should finish up with the case, and he said "go ahead." I delivered the after-birth and gave it into the hands of an old woman, who took it away. After the child was bathed I began to make preparation to take the long disagreeable ride home. The doctor was anxious that I should stay longer. I said there was no necessity of my doing so, that everything was all right. He then wanted me to leave my instruments, saying that he was going to town the next morning and would bring them in. I thanked him and said that they were no trouble for me to carry, that I strapped them to the saddle; so I mounted and took my leave. (Had I known what was in the doctor's mind, and his reason for wishing the instruments left, a great deal of trouble and pain could have been obviated.) This was Saturday. The following Monday he walked into my office in a burning rage. I soon discovered that he thought I had endeavored to do him an injury by leaving the after-birth undelivered. To say that I was shocked, surprised and dumfounded is putting it mildly. I didn't know what to say. To be accused, after many years of active practice, of trying to knock on another doctor, at the expense of a poor suffering mortal was beyond my comprehension. I said: "Why, Doctor, what can you mean? Why, the absence of the cord should be evidence enough to prove that there was no retention of the placenta; and then you should have been able to tell by the feeling of the uterus," etc. He remarked that I had pulled the cord off (and that was what he thought I had done). He also said that when he "missed the cord" he took a speculum and looked very carefully all around up in there for it, but could not see anythink that looked like an after-birth. Of course, I was very angry, but this last set my risibles to working, and smiling I said: "Why, Doctor, you are as ignorant as a mule, and you should not be allowed to straddle another pair of saddle-bags. If I were the husband of that poor woman you so brutally butchered up trying to find that placenta I would sue you for damages."

This is one of the most remarkable happenings I ever heard of. A greater display of ignorance could not well be imagined. He, I was told by the woman's husband, worked for hours the day I left, trying to get the after-birth, after sending for another doctor possessed of sense, who merely asked who took the placenta, and when the woman came in and told the doctor that she had given it to the husband he then took the doctor to a garden, and after a little digging found the lost part.

If any of the brothers can beat this for real genuine ignorance, I would like them to come forth with their tales.

GEORGE B. SIMPSON, M.D.
Seventh street, Parkersburg, W. Va.

Ante-Partum Hemorrhage.

EDITOR MEDICAL COUNCIL:

I was called recently at 1 o'clock A. M. to a confinement, the young husband told me, and, as it was not far from my home, I was soon at the bedside, where I found a young woman lying on the bed and a pile of blood-stained clothes on the floor. I asked at once whether all this blood came from her, and the mother-in-law informed me there had been much more. I suspected placenta previa and prepared for work.

On making a digital examination I encountered coagulation, which seemed to give way, and on removing the examining fingers there was a terrific gush of blood. I did not reach the os nor feel any placenta. I made a second examination with

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the same result, except this time I felt the umbilical cord, which was prolapsed. I had in my bag a piece of alum, such as barbers use to check bleeding, which I inserted in the vagina, and also placed a large cotton tampon within. I then waited a few minutes and found that the bleeding had nearly ceased. I then made a careful examination and reached the mouth of the womb, which was dilated about two and one-half inches. I inserted the index and middle fingers, using them as a dilator, which immediately brought on labor pains. She had suffered no pain whatever before this. I forgot to mention that she thought she was about seven months advanced in first pregnancy. The pains were intense. There was no liquor amnii, so it must have escaped with the hemorrhage, the dilation being by the pressure of the head of the fetus and my fingers. After about an hour's labor the fetus was delivered dead, and I pronounced it about six months advanced. A few minutes elapsed and I delivered the placenta very readily and the patient made an uninterrupted recovery.

As to the cause: The lady told me that her husband had intercourse with her while sitting on a chair about two hours before the hemorrhage began, and that it was very painful to her, but he completed the act—rather brutal. The obscure points in this case are: What caused the hemorrhage? What stopped it? Where did the blood all come from? What caused the liquor amnii (if any) to escape? Let me add that there was the usual amount of blood following the delivery of the placenta. I have had about thirty-five years' experience in obstetric work, but this was a "new one on me."

O. B. Surface, M.D.
1612 Shelby street, Indianapolis, Ind.

If Your Journal Is Late.

Among the economies the Postal Department is instituting is the following in the transportation of second-class mail matter (periodical publications). This matter in future is to be sent by fast freight in carload lots, instead of sending it with the other mail matter.

For this reason some of our subscribers, especially those at a distance from Philadelphia, may not receive The Council as promptly on the first of each month as heretofore. Wait four or five days, in such a case, before writing us, as the delay will probably be due to the slower transit.

We need have no quarrel with those who set themselves up as opposed to progress. Let us salute them as we pass.

Sodium Chlorate: Its Use in Stomach Affections, and Especially in Hyperchlorydia.

To The Medical Council:

In 1893 Professor Brissaud, at the "Association Française pour l'avancement des Sciences," showed many cases of carcinoma ventriculi, which has been remarkably improved by the use of sodium chlorate.

Professor Auchard came to the same conclusions as Professor Brissaud.

For a number of years I have (since 1893) prescribed the remedy for different ailments of the stomach and have had such good results that I want to communicate them to the readers of The Medical Council.

Before everything we ought to bear in mind that sodium chlorate (always write the name in full, please!) is toxic in overdoses and might produce albuminuria. But in small and medium doses (1 or 2 drachms a day) it can be administered for months without producing disagreeable symptoms.

Given in doses of ½ to 1 drachm twice a day, in warm water, long time after meals, it favorably influences stomach cancer. The pains disappear, vomiting ceases, and the appetite improves. Never, though, has the tumor been seen to become smaller.

In chronic gastritis, ulcus ventriculi, and hyperchlorydia, the results are excellent.

However, in atony of the stomach walls and in nervous dyspepsia the results are doubtful.

As to the physical action of the remedy, it is understood that the stringent power of the salt diminishes the inflammation as it does the catarrh and the congestion of the mucous lining of the stomach, and cures most assuredly the superficial ulcerations.

D. Zwigtman, M.D.
City Health Officer, Niles, Mich.

Doctor, what are the three most prevalent diseases in your practice by number of cases?

In what diseases or surgical conditions does the general family physician most need practical instruction, based upon your own experience and also upon your observation of others?

What subjects would you like treated in the near future in The Medical Council.

In preparing an article for publication you often make it far more effective by sending with it suitable photographs or India ink drawings for illustrations. We will always be glad to make plates, of course at our expense, and when the article is published will send the plates to the author for any future use he may desire to make of them.

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Adenoids.

This question is presented to our readers: Does any one know of any drug or preparation which, applied to the post-nasal space, will cause the disappearance of adenoids?—MEDICAL COUNCIL, May, 1911.

TO THE MEDICAL COUNCIL:

Replying to the above question, I will state, in the beginning, that I know of no remedy that will have any effect to cause adenoids to disappear, when applied to the post-nasal space. If there is such a remedy, I would like to know it. The reason I reply to the above question is because I do not endorse the "surgical circus" that is now being made by some pseudo specialists to remove adenoids.

There are any number of deaths from general anesthetics that are not reported. The number of children that are exposed to this danger appears to me to be needless. The best instrument for the removal of adenoids I ever saw is a good strong finger nail on the right or left index finger. The operation, as I have performed it many times, is as follows:

The index finger is cleansed and dried, then it is painted with tr. iodine U. S. P., an extra coat is applied around and under the nail. With the child seated in a chair, the operator and the patient facing the same direction, patient to left of operator, the left hand of the operator is passed over the head and under the chin of the patient, the head held securely to the operator's left thigh, the operator's left thumb is then pressed on the patient's left cheek and pressed firmly in between the patient's teeth. The skin-covered thumb thus acts as a gag. In the position just described, the patient is securely held, and the index finger of the right hand is dipped into glycerine and passed quickly over the tongue into the post-nasal space. A few movements of the finger tells the experienced operator just what tissue to remove, and they are scraped away with the finger nail. All of this is done in much less time than it takes to tell it. There is a squall or two, some fear from the sight of blood, a bloody nose and some bloody expectoration, and that is all there is to it. There is no danger to the child, nor is there danger of the operator being bitten if he is adept. Before attempting to do this operation it is well to use this plan to diagnose adenoids in many children first.

I have often been consulted by anxious parents to know if their children had adenoids. On these occasions I ask them if they desire them removed, telling them that I can remove the adenoid at the same time I make the examination. It will save the child another fright, and if adenoids are there they should be removed. If parents do not consent to removal, it is useless to make examination. An examination and diagnosis of adenoids, with patients to leave your office, gives an opportunity for a "surgical circus," large and juicy fees, and the danger to the patient from unnecessary anesthesia.

The advantages of this operation are: That it can be performed without any assistants; it is less dangerous to the child; it can be performed at the patient's home; it can be performed at any time. In the above description there is nothing original. I learned it from a physician with a large practice, who did the business and kept his patients. The plan has been followed by me many times and always with the best results.

CHARLES V. CROSS, M.D.
2808 California street, San Francisco, Cal.

Adenoids—Another Reply.

TO THE MEDICAL COUNCIL:

I notice a query on page 193 of May MEDICAL COUNCIL, and will say that I have never had a case of adenoids in my practice, but think that any remedy that would cause the absorption of nasal polypi and venereal warts would act equally well if applied to the adenoid growths. I have used Lloyd's specific thuja as a local treatment in all cases of venereal warts and nasal polypi that I have met with in the past twenty-three years with uniform success. I order the remedy applied two or three times daily, using a fresh swab of absorbent cotton for each application. I hope some one will give thuja a fair test in the treatment of adenoids and report. I have never found any bad effect from the use of thuja as a local treatment.

C. B. DEAN, M.D.
Flemington, Mo.

Dr. J. L. Brockbank, Du Bois, Pa., on May 20, 1911, attended a woman in confinement, delivering her of a son. The matter of special interest in the case is the fact that this makes an even 2000 for him since beginning his practice in 1886.

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Ferri Perchloride in Adenoids.

To The Medical Council:

On page 193 of your May issue the question is asked: Is there any drug or preparation which, applied to the post-nasal space, will cause adenoids to disappear.

Tr. ferri perchloridi used in a stronger or milder solution applied to the parts several times will remove adenoids.

Strong.

℞ Tr. ferri perchlor.
Glycerine ..... aa 3iv

Milder.

℞ Tr. ferri perchlor..... 3ii
Glycerine 3iv

Mild.

℞ Tr. ferri perchlor..... 3i
Glycerine 3iv

The strong solution may be used once a day and better in the morning; the mild solution may be used twice a day if desired.

J. C. Warbrick, M.D.
306 E. Forty-third street, Chicago, Ill.

Adenoids and Saw Palmetto.

To The Medical Council:

In partial response to your question, page 193, May Council: "Does any one know of any drug which * * * will cause the disappearance of adenoids?" I am sending an extract from a paper read by me before the Texas State Medical Association, May, 1907.

My use of saw palmetto since 1893 persuades me that by its proper and persistent use many cases may escape the knife when it would otherwise be necessary, yet I would not wish to be understood to say that it will take the place of the knife in all cases.

I. L. Van Zandt, M.D.

A Plea for Specific Medication.

By I. L. Van Zandt, M.D.,
Ft. Worth, Texas.

* * * * * *

"Saw palmetto, best known, perhaps, to a large part of the profession, through the advertisement of its proprietary compounds, has excellent effects in the bladder and prostatic troubles of old men.

There is, however, another use to which I have directed attention in a paper presented to the Tarrant County Medical Society and published in the *N. Y. Medical Record.*

About thirteen years ago I began using it for chronic sore throats; cases in which, every few weeks during the winter, an acute attack occurs. The patients, though relieved, do not get well. There is a constant nagging irritation, which saps the vitality of the little ones who are the most common subjects. They do not look well, and rarely feel so. They do not eat well. Under its use I have seen many get well and stay well, taking on new life, and growing as they had not done for years.

I have seen a boy of seven, condemned by a good specialist to an operation for enlarged tonsils and adenoids, because of mouth breathing and snoring, by a few weeks' taking of the remedy relieved of every symptom, so that his sleep, without a pillow, two being necessary before, was as quiet as that of a babe.

I have seen a girl of ten, the subject of continued throat treatment, tonsils having been removed, having frequent attacks of spasmodic croup, relieved so promptly and permanently that she has not had an attack since she began the treatment, though three winters have passed. The increase in her growth has been remarkable.

Saw palmetto seems to have a selective affinity for the parts. It relieves them of irritation and restores them to health and vigor. Do not, however, expect permanent results unless the remedy is continued for two or three months.

Electric Desiccation of Tumors, Neoplasms, Hemorrhoids, etc.

Editor Medical Council:

Your editorial comment upon "Electric Desiccation of Tumors" has been responsible for an overwhelming number of letters from physicians in all parts of the country. Many questions have been asked which it will be impossible to answer personally because of great demands upon my time. The information desired, with one exception, will appear in the reprint which will soon be ready, and which shall be sent to those who have made the request for a copy.

The exception spoken of is the name of manufacturer of my apparatus. The Baker Electric Company, of 438 Asylum street, Hartford, Conn., constructed my machine, and their engineers have co-operated with me in experimental work, and have rendered me valuable assistance in bringing "electric desiccation" to a successful issue.

W. L. Clark, M.D.
1809 Chestnut Street, Philadelphia, Pa.

When catheterizing neurotic girls just look a little out. "There's a reason" in some of these cases. When they insist upon the use of the catheter, just send a woman nurse because you are "too busy."

We have just as good health resorts in America as they have in Europe. Remember this with your next rich patient.

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The Business Side

OF MEDICAL PRACTICE

While we, as physicians, desire to be scientific students and practitioners of medicine, yet we desire also, for the welfare of our dependent ones and for the sake of our standing in the community, to secure a fair compensation for the services we render to our fellowmen.

Medical Defense.

Several insurance companies offer policies protecting holders against the blackmailing tactics of self-seeking individuals, providing proper legal defense in cases of alleged malpractice, and even paying for the policyholder any damages assessed by juries and courts. There is no doubt that the best of these companies offer a form of protection appreciated by many physicians, and the fact that any doctor against whom action at law threatens, escapes without especial annoyance or publicity when it becomes known that the case will be adequately defended by a commercially responsible company is one of the greatest advantages of the plan.

So far as we have been able to learn, these companies have been giving satisfaction, and it must be remembered that their business bulks largely among the surgeons and hospital men, classed, from the standpoint of the insurance writers, as hazardous risks. The ten or fifteen dollars expense of such protection annually is probably in excess of the defense expense (plus a fair profit for carrying the risks) of the *average* of the profession. Were *all* active physicians to carry such insurance, it is likely there would soon be a reduction in rates.

Were a company organized which would give a lower rate to the average physician possessed of little property, and not largely engaged in surgical practice, it is probable they would do a large volume of business if they worked the field as well as do other insurance concerns. But they would have difficulty in convincing most men that they *needed* such insurance.

Appreciating the fact that alleged malpractice suits would largely decline in number were the profession at large protected, and that many men will not pay the present rate for such insurance, seventeen State medical societies give to their membership medical defense at one dollar per annum, *but do not pay judgments.* Judging by the experience of the New York society, this plan is better than appears upon its face, for from 1900 to 1910 they defended two hundred and fifty cases with none finally lost, one appealed and no damages paid in any case.

The Medical Society of the State of Pennsylvania proposes to try this plan of one dollar annual assessment per member, although it has at present a small medical defense fund. We are not prepared to fully endorse the plan, since it has not been sufficiently tried out to reveal its value or its limitations. How valuable such insurance may be depends upon a good many factors we need not discuss, but we would like to see the plan tried in Pennsylvania. Its cost is small and, if it does no other good, the *moral* effect will be excellent, and will greatly reduce the number of suits instituted for alleged malpractice. Doubtless, in time, as the fund accumulates, the actual protection to the membership will be adequate. But we would not advise the surgeons and others especially liable to suits to dispense with the protection they are now carrying, nor do we think it advisable for the committee having in charge this proposed experiment of the State society to issue statements in disparagement of the work of the commercial insurance companies selling such protection. These companies have been long in the field and are an assured protection, while the medical society protection is, as yet, experimental. It impresses us that there need be no conflict or disagreeable agitation over the matter. There is room for both plans, and we predict that the society limited protection will ultimately strengthen the commercial companies by rendering more adequate protection than mere defense popular among the profession.

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The Lure of the Land and the Middle-Aged Doctor.

By Thomas S. Blair, M.D.,
Harrisburg, Pa.

Second Paper.

I. The Old South. II. In the Tropics.

"The Old Dominion" is a charming place and is full of charming people. And it is coming into its own again. If Europe had the stretch of land from Maryland to the Gulf she would not be sending so many immigrants to our shores. The war between the States and the engendered bitterness should be soon forgotten, and the sooner it is forgotten the sooner will the great Southland add her capable quota to the national wealth. The South always was a splendid place to find the gentleman planter. He is there yet, and conditions nowhere in the country are better for the retired or semi-retired doctor than in the South.

Living is cheap in the South, labor is cheap, land is cheap, and the people appreciate good doctors. We have been amazed when in the Southern States to see how cheap much of the good land really is. Especially in Virginia and the Carolinas is there good land, well watered and upon tolerable roads no great remove from some sort of a town. When we consider that these Southern States are within a few hours or a day of Washington, and not over two days at most from the large Eastern markets, the wonder is that more Northern people do not go there to live. South of Washington the winters are soft compared with those of the North, and the summers are not so hot as many Northern people imagine. Washington city has a summer very much warmer than do places considerably south of it.

A young and energetic doctor might prefer a section more full of life and excitement than is the rural South. A middle-aged doctor, with considerable capital at command, might prefer to buy more expensive land and raise more difficult crops than are those of the old South. Many Northern people dislike the negroes and prefer other labor. It is a matter of temperament and training. But a man advancing in years and who is losing the asperities of life and opinion, seeking for peace and contentment, willing to view the negro tolerantly, and who knows how to manage him, and who is of slender or limited resources, will probably find more real comfort and prosperity in the Southland than elsewhere.

Most of the Southern State boards are not so hard to pass, nor does it take so long to build up a practice in the South as in some other sections. Aside from the heavy field crops, there is not a great deal of hard work to do during the heated term of summer. Small fruits and early vegetables are off the ground before it is uncomfortably hot. Negro labor is not high-priced and is fairly effective under proper guidance. There are no great fortunes to be made at small farming in the old South, but the returns are satisfactory.

I would not advise Northern doctors of advancing years to isolate themselves too remotely from stores and railroads in the old South, but there are many rural localities where the possible income is not attractive to a younger man, but that needs a doctor. Many such locations exist where a still active man could do what practice there is and cultivate, with the help of negroes, as much ground as he would care to. Deciduous fruits do well in the South and the market is the whole North. Many small fruits and garden vegetables are very profitably raised. A doctor of quiet taste, or who has been financially unfortunate, will find more social status and more real comfort in living in the South than most Northern people imagine. Certainly one gets the most for the money there. Many tired and worn people in the North would find the South a haven of rest.

Nor is the South all crude and filled with negro shacks. Such places as Richmond, Norfolk, and nearby towns, Charleston, Louisville, and many more, inclusive of such thriving places as Birmingham and other manufacturing places, as well as hundreds of orderly and cultivated communities we seldom hear of in the papers, are filled with charming people. It is true there are circles who look askance at the Northern man who works with his hands, but the old Southern aristocracy is gradually getting over that idea. It is to their credit that they do not worship money as we do in the North, and that is a great compensation.

A doctor with only moderate capital can hire negro labor for most of the work upon a small plantation given up to tobacco, vegetables, deciduous trees and small fruits, and yet make a fair net profit and attend

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to considerable practice as well. Intensive farming does not pay so well in the South as in some other localities, and the negroes steal a good deal, except where sharp lessons have taught them better.

For some reason, it is hard to enthuse people over the South. Probably were the States renamed and promoters to issue perfectly true literature about the localities and raise the price of land to four or five times what it is to-day, hosts of Northern people would rush down there.

Let me advise the harrassed doctor of Middle-age who can raise two or three thousand dollars as a maximum, and who sees a quick finish to that so soon as he is unable to keep up a professional pace like to the young men, to throw most promotion literature away and take a cheap trip down South and get his eyes open to its possibilities and present status.

Let me warn the reader, however, that while raising tobacco is quite profitable in the Southern country, there is a good deal of attention necessary and special details of culture very necessary to learn. The doctor should begin with it in a very small way. There are, also, many reasons why a good canning factory is a very profitable neighbor. Gluts of the market often occur with certain Southern produce.

The Northern man who tries to live in the South like he did in the North makes a mistake. The summer is long and one feels the heat too seriously to be constantly on the jump in the middle of the day. Adapt yourself to the country and the ways of the people and you will soon learn that the Southerner has been very unjustly criticised. I have tried it a bit down there and like both the country and the people. There is plenty of opportunity for the middle-aged doctor to make safe investment, to practice his profession (though not often a specialty), to live well and to save a little money from what produce he cares to sell.

The Tropics

Are exploited very beautifully in fiction. In reality there is a less pleasant side. There are elevated regions under the equator with an all but ideal climate, as in parts of South America and Africa, but the people and the lack of the agencies of white civilization preclude our going there. It is asserted that colonization in the tropics by white men fails at the third generation from the stock dying out or being admixed with the native blood. The white planters of Brazil rely all but wholly upon native labor, and this is a necessity everywhere in the tropics. While tropical products may be profitably raised, it is possible only with adequate capital and organization. The stable companies seldom look for small stockholders and the small planter is under a great handicap. I see no real opening for the middle-aged doctor in the tropics except in purely professional engagements.

(In our next issue Dr. Blair will discuss Florida.)

That Florida Land Question Again.

To THE MEDICAL COUNCIL:

Having heard and read much of Florida, I became somewhat interested in the country, but, as I had heard much of the many skin games worked, I was, of course, suspicious of all the State, so decided to go and investigate for myself and for a number of friends.

After visiting many places and making all the inquiry I could, I fully decided that Florida is very much as most other States—some very good, some good, some not so good, and some very bad.

After all the talk of investing at home, abroad, or elsewhere, there are a few things to keep in mind. I want to know the *future* prospects, especially in land, and that you may determine by quality of soil, location, and climate. I have never lost money on undeveloped or unimproved land, and I have bought land more than a thousand miles from me. I have lost in a few small deals on city property, and was never skinned worse than by a *friend* at home. This taught me not to take too much for granted.

Brother physicians, you must invest if you ever have more than a mere living, and a 3 or 4 per cent. investment will not make you very much. Do not be too cautious—so much so that you will not invest. I was that way once myself, and never had more than I needed to actually live upon.

Now, back to Florida. Did I invest? Yes, I did; and will make money on my investment. I advised my friends to invest, as well as my own brothers. I do not believe all Florida to be good, but land that will yield $200 per acre annually to be had for $50 looks good to me—then the climate thrown in; but where you are satisfied there is the place for you.

G. S. BARGER, M.D.

Wayne, Okla.

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Don't Get "Stuck" with Porcupine Quills.

Gold has been discovered in the Porcupine region, but it is mostly on or near the surface and deep prospects do not pan out. This is an indication that the wealth of the region will be soon exhausted. Also, it has been developed that for every genuine gold mine in the region there are over a hundred fakes. It is strictly a proposition for experienced miners, who must be actually on the ground, and would prove a costly plaything in the hands of doctors between professional visits. Not only don't fool with it yourself, but persuade all your friends to stay out.

The State Should Protect Its Citizens.

Doctor, we call your attention to the following bill to regulate the sale of mining securities for the better protection of the investor, which is now before the Massachusetts Legislature. We reprint the bill in full. If such a bill, including all stocks as well as mining stocks, were made a law in all the States, the swindling promoter, who now lives by his wits through our gullibility, on the fruits of our labor, would have to labor some himself for a change.

Section 1. Mining stocks listed in this Commonwealth shall be subjected to the provisions of the following sections:

Sec. 2. Before the stock of any mining corporation or trust shall be listed, or dealt in, on the Boston Stock Exchange, or on the Boston Curb, or on any other stock exchange which does business in the Commonwealth, the president and a majority of the directors, or trustees, shall, in writing, signed and sworn to by them, make and file a certificate with the commissioner of corporations, which shall specify the corporate name, the state or country in which the corporation was organized or incorporated; the name of the city, town or county, and state and country in which its mines are located; the amount and number of shares of the capital stock, and the name, place and residence, and number of shares of each stockholder; and a true description of the property.

Sec. 3. The president and a majority of the directors or trustees of a mining corporation, or trust, whose shares are listed on the Boston Stock Exchange, or the Boston Curb, or any other stock exchange, which does business in this Commonwealth, within thirty days after the annual meeting of such corporation, or trust, shall file with the commissioner of corporations a detailed statement of the conditions of such mines, and the assets and liabilities of such corporation or trust. And they shall certify and make oath that the report is correct according to their best knowledge and belief.

Sec. 4. A mining corporation, or trust, whose stock is listed or dealt in on the Boston Stock Exchange, or Boston Curb, or any other stock exchange which does business in this Commonwealth, shall, at the request of 25 per cent. of the stockholders, submit to the inspection of a mining engineer, to be selected by them, the properties so listed, such stockholders to bear one-half the expense, and the corporation the other half, for such inspection.

Sec. 5. If an impairment of the capital stock of such corporation or trust arises from the official mismanagement of its officers, they shall be personally liable to make good such loss.

Sec. 6. The commissioner of corporations shall notify the Boston Stock Exchange and the Boston Curb, or any stock exchange doing business in this Commonwealth, of any failure of a mining corporation or trust to comply with the provisions of section 3 of this act, and unless the certificate required is filed with the commissioner of corporations within sixty days after such notice, said corporation or trust shall be stricken from the lists of said such exchanges.

Sec. 7. Any member of the Boston Stock Exchange, or Boston Curb, or any other stock exchange doing business in this Commonwealth, who deals on said exchanges in the stock of any mining corporation, or trust, not entitled to be listed, under the provisions of this act, shall be punished by a fine of not more than $1,000, or by imprisonment for not more than three years in the state prison, or by both such fine and imprisonment.

Sec. 8. Whoever advertises a mine for the purpose of selling stock, in any newspaper published in this Commonwealth, unless the certificates required by sections 2 and 3 of this act have been duly filed, shall be punished by a fine not exceeding $1,000, or by imprisonment for not more than three years in the state prison, or by both for each offense.

Sec. 9. Any person who knowingly shall make a false statement in any certificate or report, made under the provisions of this act, shall be punished by a fine of not more than $1,000, or by imprisonment for not more than three years in the state prison, or by both such fine and imprisonment.

Sec. 10. This act shall take effect on the first day of July, 1911.

For the Business Side.

EDITOR THE MEDICAL COUNCIL:

If I had THE COUNCIL known,
Its counsel, too, had pondered,
The thousands that have slipped my grip
I never should have squandered.
E'en now, when three score years and more
Are luminous with "visions,"
I'll pause and ponder its advice
Before I reach decisions.

A POETASTER.

A friend has given as one secret of the success of osteopathy among the idle rich, that it supplies the need of exercise which they so much neglect in their mode of living.

Readers asking about the value of any stock or other proposition should send with the inquiry any circulars or other literature they have received, so that we may have a proper basis for investigation.

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BEST IDEAS FROM RECENT LITERATURE

Treatment of Tetanus.

Too much emphasis cannot be placed upon the early and vigorous use of tetanus antitoxin for prophylaxis or cure. So much is this the case that it is now advisable to administer the serum intravenously, this method yielding speedier results than the subcutaneous method, while being safer than the intraspinal or intracerebral. Dr. S. R. Klein, New York City (*American Medicine,* June, 1910), recommends from 15,000 to 30,000 units every four to eight hours. Experience has taught that cases having a short period of incubation—from five to eight days—are extremely grave, while only those of a *long* period of incubation—from eight to twenty-four days, partially developed cases, subacute cases and chronic cases afford the needed opportunity for treatment and hold out a hope of recovery. Fourth of July statistics show the frightful mortality of from eighty to ninety-eight per cent. In many instances the only cases in which recovery is reported are those in which prophylactic treatment was resorted to at once, before the toxin of tetanus had time to permeate the nervous system.

The following rules are advocated for general practice:

(1) All wounds in which—from the environment—there is any risk of tetanus, should receive open treatment.

(2) Tetanus antitoxin should be used immediately as a prophylactic to immunize the patient if possible, and,

(3) The use of tetanus antitoxin should be continued in prompt and sufficient doses until all danger from infection of the toxin of tetanus has been eliminated.

Latent Diphtheria Bacillus Infection.

From a clinical point of view there are three groups of cases of latent diphtheria, according to Dr. P. W. Williams, London (*Journal of Laryngology, Rhinology and Otology,* January, 1910). These groups he defines as follows:

(1) Patients who afford none of the usual clinical indications of diphtheria, are not definitely ill and yet are found to be anemic, or have increased pulse frequency, are simply poorly nourished in association with nasal catarrh, membranous rhinitis, faucial redness or slight subacute tonsilitis, otorrhea, sores, etc., which on bacteriological examination prove to be diphtheria.

(2) Cases with local diphtheritic lesions, but presenting no general symptoms of ill health. This class comprises cases that are indisputably latent.

(3) Persons who present no local lesion and no departure from normal health, but in whom diphtheria bacilli have been discovered by culture tests, *e.g.,* healthy infected contacts.

Diagnosis has been made generally by finding Klebs-Loeffler bacilli in the culture, notwithstanding the discovery of diphtheroid bacilli which were virulent and yet not neutralized in their pathogenesis by the true diphtheria antitoxin. The virulence test is rated as the most practical criterion.

Treatment.—The author believes that local antiseptic solutions are deemed inefficient, because one cannot get the solution in the deepest pocket of the lymphoid crypts or to the lining mucous membrane of the accessory cavities when the nasal passages are involved. Antitoxin is likely to fail, possibly because the proportion of bactericidal substances varies and that it is necessary to use larger quantities of the serum than is necessary for antitoxic effect. Vaccines have been used with good results.

Suggestions for Treatment of Phthisis.

In considering the subject of tuberculosis, the two following methods of treatment are of interest.

Potassium bichromate.

Dr. James B. Tombleson, B.A., M.B., B.Ch., Oxon., in *The Lancet* of November 19, 1910, cites six cases of phthisis of from nine months to seven years' duration, treated with potassium bichromate, in which there was marked improvement. Doctor Tombleson says:

"No other mixtures than the mixtures mentioned later have been given at any time during the treatment in any of the cases. Improvement has been noticeable after the expiration of the first fortnight of treatment. I am quite aware of the fact that the evidence . . . is incomplete, but I hope it will be sufficient to induce some one else to try it for themselves."

" . . . I give the potassium bichromate in doses of ¼ grain (2½ minims of a 10 per cent. solution in water) either alone or in a tonic mixture (phosphate, hypophosphite, or simple iron), . . . taken in a wineglass of water after food, at first twice and later three times a day. The first dose, and possibly the second, may cause

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vomiting, but . . . in my experience toleration is easily established. . . . The color of some of the mixtures changes from yellow to green, but this seems in no way to impair the efficacy . . ."

Raw Meat and Meat Juice (Zomotherapy).

Dr. J. Hericourt, Medical Superintendent of the Paris Municipal Anti-Tuberculosis Dispensary at Jouye-Taniès, in *The Lancet* of January 7, 1911, says:

"The employment of raw meat juice for therapeutic purposes is based on purely empirical data, and we are not in a position to offer any scientific explanation of its action. . . . Tuberculosis never invades muscle fiber, and the well-marked muscle atrophy that occurs in phthisical subjects suggests the possibility of the muscles having been sacrificed in the defense of the organism. On the other hand, the presence in raw meats of enzymes, ferments and diastases which play such an important part in nutrition and in the struggle against the infections may . . . account for the activity of the muscle plasma. It may be . . . that muscle juice acts merely as a special stimulant to the nervous system. The slight but quite characteristic exhilaration that follows the ingestion of . . . large amounts of muscle plasma militates in favor of . . . nervous stimulation." . . .

"It is probably no exaggeration to say that the raw meat treatment of pulmonary phthisis yields results not approached by any other means at present available. . . ."

"There is . . . no reason why the administration of raw meat pulp . . . should not be associated with the therapeutical employment of muscle plasma; . . . by adopting this plan we obtain the maximum advantages attending this method of treatment. . . . To be efficacious the zomo-therapeutic treatment entails the ingestion of at least the amount of muscle juice contained in 300 grammes of beef in mild cases and of 500 grammes and upwards in bad cases. Smaller quantities are, no doubt, productive of benefit, but cannot be relied upon to yield characteristic results. The unconclusive results reported . . . have been due to neglect of this cardinal principle. So it is only fair to add that . . . a few cases, usually those associated with secondary infections, . . . prove refractory." . . .

"The juice is easy to take and the amount ingested comparatively small. The taste is not unpleasant and is easily masked, and the risk of tenia is non-existent."

"There remains, it is true, the technical difficulty of preparing the raw meat juice economically and perfectly fresh. The first can be in great measure overcome by the employment of sufficient powerful presses by means of which the preparation of expressed juice can be raised from 25 per cent. (which is the average yield with ordinary domestic presses) to 40 and even 50 per cent. There remains the difficulty of obtaining perfectly fresh meat. and this is one of the greatest importance, because meat juice is eminently unstable, . . . and it soon develops toxic properties. . . . The juice must be expressed as soon as possible after the animal has been slaughtered, two or three hours in summer and four hours in winter, . . . collected in a vessel surrounded by ice and consumed as soon as possible. . . . These requirements make the treatment a troublesome one, and also somewhat expensive, but . . . its efficacy is such that it is very largely employed."

Digestive Disorders and Their Treatment.

There are "outward and visible signs" by which, in the light of modern physiology, the general practician may recognize the various digestive disorders and treat them effectively without invariable or at least early recourse to elaborate laboratory methods of diagnosis. In this we fully concur with the views of Dr. George H. Chandler, of Chicago, whose general plan of treatment (*Am. Jour. Clinical Medicine,* Sept., '09) is substantially as here given.

Imperfect mastication of starchy food leads to symptoms we are only too prone to attribute to intestinal indigestion. The better term would be buccal inefficiency. In hyperchlorhydria the action of the salivary enzymes upon starches ceases when the food reaches the stomach. The excess of acid retards the opening of the pylorus. The result is farther arrest of digestion, gastric fullness and distension, burning, etc. The rational treatment—clearing of the entire tract, restriction of starches and insistence upon thorough mastication—is clear.

As a matter of fact the urgent need of the hour is not new and potent digestants but a better understanding by the physician of the digestive process and *correct* administration of the quite effective agents already at his disposal. The indiscriminate use of pepsin, pancreatin, sodium-bicarbonate and charcoal mixtures has caused infinite misery to many thousand confiding patients and a loss of therapeutic acumen and diagnostic honesty in the doctor beyond computation.

In every case of indigestion the step of first importance is to secure therapeutic cleanliness of the alimentary canal. Next teach the patient that "digestion begins inside the teeth." If incisors or molars are missing or disabled, we should recommend a prompt visit to the dentist. Even if the teeth are perfect, we can at least prescribe an alkaline antiseptic mouth wash to be used both prior and subsequent to meals. Only so can we hope to start *properly* the digestion of food.

If *hypochlorhydria* or motor insufficiency has been a feature, we may rationally give strychnine and capsicum, or some similar stimulant. half an hour prior to meals, and 10 to 15 minims of dilute hydrochloric acid with the food. In some cases of gastric atony hydrastin and juglandin prove wonderfully effective; these may replace or be alternated with the strychnine and capsicum. Papayotin acts satisfactorily here—alone or in combination with other indicated remedies. Fermentative conditions will demand charcoal.

Careful observance of the patient will enable us to gauge progress, and we can add agents to influence intestinal digestion or to hasten the transit of the food mass, or its ultimate waste, as may be necessary. *But*—only by correcting basal

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wrongs and restoring as rapidly as possible normal conditions can we hope to cure.

It is essential to know definitely whether there exist an ulcer, cardialgia, gastrodynia, or what not as a complicating affection. A careful study of the more recent works upon diseases of the stomach and internal medicine will enable the practician possessed of ordinary diagnostic acumen to recognize the gross symptoms present in all varieties of "indigestion" without resorting immediately to test-meals, lavage, the gastrodiophane, etc. If ordinary rational measures fail to bring about improvement *then* it is essential that we have "resource to our art."

The man who treats all his "dyspeptics" with the same tablet, or an assortment of two or three tablets, does not exercise reasonable skill, and, sooner or later, the people will find him out and go straight to the fellow who diagnoses closely and, recognizing underlying pathological conditions, corrects them by exhibiting the right remedies to effect.

A New Principle in the Treatment of Graves' Disease.

Dr. G. W. Crile, Cleveland, Ohio, in the *Lancet-Clinic* of April 1, 1911, gives some interesting information as to measures for eliminating the fear, which is such an important element in the treatment of Graves' disease.

Dr. Crile says: "Despite the great progress made in the surgical treatment of Graves' disease, there is much to be accomplished in the treatment of those cases which are abandoned by the surgeon. . . . Cases of Graves' disease are pathologically susceptible to trauma and fear, and in some cases death has been clearly attributable to fear alone. . . . Reflecting on the phylogenic origin of fear, if fear could produce hyperthyroidism, trauma also should produce it. . . . Barton Cooke Hirst has collected a series of seventy-three surgical operations upon other parts of the body in Graves' disease. He showed the surgical risk just as high and the phenomena presented the same as in operations upon the gland itself. . . .

"Now, in these apparently hopeless cases, the ligation is done in the following manner: For several days the patient, while in bed, is made familiar with the technique of the operation; in doubtful cases the patient is even given sterile hypodermics in the region of the goitre. The patient is made so familiar with the rehearsal of operation—a very simple affair—that the performance of the ligation itself will not in the least be appreciated as an operation by the patient. A hypodermic of morphia is given an hour prior to operation. The skin, fascia, and other tissue overlying the upper poles of both lobes is cocainized. A transverse incision an inch long is then made through the skin and the fascia. By means of a full curved Kelly needle the upper pole of the thyroid is ligated *en masse*—including any other tissue, such as superficial muscle, that may come within the grasp of the ligature, which is tightly tied. A stitch or two closes the skin. The ligation of both poles is done in a few minutes, and the patient is not aware of its performance. The mere fact that the technique is carried out in bed is a great aid. Some patients have even left the hospital without realizing that they had had an operation.

"The ligation of the artery necessarily includes the nerve supply of the gland which gains entrance to the gland along the walls of the arteries. There is, as I believe, convincing evidence that the benefits of ligation are due to the break of the nerve connection between the brain and the thyroid rather than to the closure of the arteries.

" . . . No case of Graves' disease is cured by operation alone. and no case is cured until the thyroid gland and the brain are both restored to the normal. This is best secured by operating in such a manner that there is a minimum excitation of the nervous system and of the thyroid glands; hence, no volatile outbursts during or after the operation, and no operative danger, then placing the patient in a rest cure for a month or more, depending upon the severity of the disease. If, on the other hand, the patient after the operation is at once immersed in the environment in which the disease originated there will be many disappointments. The plan of treatment by a combination of a benign operation, followed by a prolonged rest cure, will restore the patient, in so far as tissues are not already irreparably destroyed, to the bloom of health."

Treatment of Trifacial Neuralgia.

Clinical notes of seventy-five cases of trifacial neuralgia, classical *ticdouloureux*, treated in private practice with deep injections of alcohol, embracing a total of 300 injections, forty-nine of the patients having the advanced age of from 60 to 80 years, are published by Dr. Hugh T. Patrick, of Chicago (*Journal A. M. A.*, December 11, 1909), together with his conclusions as to the relative merits of the procedure as compared with older and more popular methods of treatment. About the same time there appeared in another home journal a lengthy clinical paper by an English authority, Dr. Guthrie Rankin, London, giving in detail the older medical treatment of this peculiarly rebellious condition. We aim here to place side by side, as briefly as possible, the *old* and the *new*.

The conclusion seems justifiable that when an injection of alcohol reaches the nerve trunk pain ceases. The difficulty lies in making such an injection. Still, the experienced hand will score many successes in the first effort. The patient must needs be willing and have patience.

A good injection affords relief for a period of from one to three years. It will occur to every one that by this means old, feeble and infirm sufferers may be made comfortable at minimum risk until length of years or intercurrent disease leads to the final *exitus*.

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Doctor Patrick begs not to be understood as making a special plea for this treatment. Recognizing its many weak points, he simply ventures the opinion that in the majority of cases it is the simplest, least hazardous and best. Should it finally fail, the Abbé or the Gasserian operation is still open to the patient.

Nevertheless there is no reason to believe that these injections effect a radical cure, although some cases seem absolute cures. It were well to have more treatments after the pain has ceased, but patients seldom submit to this, being already well satisfied. Injections may generally be made in one's office, and the patient walk out in a few minutes. Still, it is better practice to have him lie down awhile.

Doctor Patrick knows of no dangers or unfavorable results of any consequence. Paresis of the sixth nerve is sometimes an accident, but is transient. Being practically a painless procedure an anesthetic is rarely necessary.

Doctor Rankin's treatment here follows: Granted that the local cause, if such there be and it can be found, has been removed, apply locally one of these sedatives:

(a) Menthol, two drachms; pure chloroform, two drachms; olive oil, one and a half ounces.

(b) Sulphate of atropin, five grains dissolved in one ounce of distilled water.

(c) Liniment of belladonna, liniment of chloroform, liniment of aconite and soap liniment in equal parts.

The severer types call for morphine subcutaneously in large doses. Hyoscine is sometimes more successful than morphia, given hypodermically in doses of two-hundredth of a grain. In this variety of headache, gelsemium, which seems to exercise a specific influence, should always be administered.

It is well to search for some dyscrasial tendency—gouty, rheumatic, malarial, syphilitic, or anemic—as a guide to the selection of medicaments which may enhance the curative influence of gelsemium, and from the following formulæ that should be chosen which seems best to meet the indications of the case under observation:—

(a) Citrate of potash, thirty grains; compound tincture of colchicum, twenty minims; tincture of gelsemium, fifteen minims; decoction of taraxacum, to one ounce.

(b) Salicylate of soda, fifteen grains; antipyrin, ten grains; tincture of gelsemium, fifteen minims; camphor water, to one ounce.

(c) Sulphate of quinine, five grains; hydrobromic acid, half a drachm; tincture of gelsemium, fifteen minims; infusion of orange, to one ounce.

(d) Iodide of potassium, ten grains; Fowler's solution, three minims; tincture of gelsemium, fifteen minims; decoction of sarsaparilla, to one ounce.

(e) Ammoniated citrate of iron, ten grains; acetate of ammonia solution, one drachm; tincture of gelsemium, fifteen minims; tincture of nux vomica, ten minims; peppermint water, to one ounce.

Any of these mixtures may be taken every four or six hours.

In some intractable cases croton-chloral succeeds better than any other drug. It may be given in the following combination: Croton-chloral-hydrate, four grains; extract of gelsemium, one-quarter of a grain; heroin, one-twelfth of a grain: in a pill, every three or four hours until relief is obtained.

Manual Treatment.

The beneficial effects obtained from manual treatment in certain conditions according to the experience of Dr. E. C. Thompson (*Boston Medical and Surgical Journal*, April 7, 1910), far exceed those of other forms of treatment. In sprains, bruises and fractures, the doctor contends, the plan has proven its value by relieving the dull, aching pain which usually accompanies these injuries. The cessation from pain is most marked, giving many hours of comfort, which cannot be obtained in any other way. Acute multiple arthritis is a disease which lends itself most readily to massage in spite of what other writers may say in regard to forcing or driving the disease to other joints. Careful manipulation of the most swollen and tender joint, beginning above the joint, should very soon relieve the pain, lessen the swelling, and allow the limb to be moved.

This value can easily be demonstrated by taking the knee and ankle of one limb for treatment, while the other similarly affected is treated by the usual orthodox remedies. Here the value of massage is seen from the first application. Gonorreal arthritis is benefited if the effusion is nonpurulent and the joints to be operated on are carefully chosen. Myalgia and lumbago should always receive massage from the first, and

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very often will need no other treatment. The myositic deposits so often found in these cases can be promptly removed by massage, relieving in a few treatments pain that may have existed for months or years.

The pain in neuritis, sciatica, and in many of the neuralgias yields at times to massage, but cases will be found that tax the ingenuity of the operator. In these some defect is usually found in the muscular or vascular system, together with some limitation of joint movement, which will be our guide as to the means to be employed. It is impossible to describe the many different methods used to obtain results, as the manipulations vary in each case and require to be altered and adapted according to the position and kind of pain and the functional disability incurred. The chief work falls on the thumb and finger tips, the palmar surface of the fingers, and the thenar and hypothenar eminences. The movements (always concentric) vary from the lightest effleurage to the most thorough petrissage and tapotement, followed frequently by active, passive, assistive, and resistive movements, or various combinations; but always without causing pain. Too rough or violent manipulation will defeat the object in view and cause increased pain.

The remedial effects of massage are increased elimination, vascularity and metabolism; absorption of infiltrations and exudations; improved nutrition; relief of congestion and sedative effect on nervous system. In addition to these, adhesions are attenuated, stretched, and sometimes broken down.

Uremia Successfully Treated by Venesection.

When the venesection is at all indicated, and is promptly resorted to, the benefits are so extraordinary that the experienced clinician who has observed the results invariably regrets that this simple, time-honored, yet grossly neglected, procedure is not more frequently employed. The following instance well illustrates our contention:

Dr. Scott P. Child, of Kansas City, Mo. (*Journal A. M. A.*, December 11, 1910), reports a severe case of uremia, the sequel of a typical scarlet fever infection in a boy of seven, that promptly yielded to the phlebotomy lancet. The temperature of the fever had become normal on the sixteenth day, and four days later, when the patient was still on liquid diet and in bed, the temperature began to rise and convulsions set in. For about twenty-four hours there were hourly convulsions. During this time unconsciousness was continuous, and for the greater part there was also coma. Hot packs were regularly and continuously applied for provoking diaphoresis; calomel and Rochelle salts, with high enteroclysis of physiologic salt solution, were used, with hope both to eliminate and to dilute the toxins present and to assist in equalizing the circulation, and, if possible, to produce diuresis indirectly. In addition, nitroglycerin and digitalin were administered hypodermically for the peripheral circulation and diuresis. With a few other measures and minor details, such was the therapeusis for twenty-four hours—with results clinically negative. No diuresis occurred; the purging and enteroclysis showed no evident stimulation; perspiration did not occur. The circulation and respiration meantime growing weaker, venesection was advised and performed.

The child was then *in extremis*, a temperature of 103 2-5 degrees, pulse irregular, high tension and 136, with Cheyne-Stokes breathing, eight respirations to the minute; delirium and muscular twitching.

He was bled between 8 and 10 ounces. Convulsions ceased with the loss of blood. Four hours after the venesection the breathing was 22, regular and easy, the temperature 102 3-5 degrees, the pulse 124 and more regular; the body was covered with perspiration and the child began to answer questions. Hourly improvement was noticeable. Hot packs, pilocarpin hypodermically, calomel and salines, with a liquid diet, were continued for twenty-four hours, then gradually given up. On the third day, 52 ounces of urine were voided voluntarily.

Ineligible Pills and Tablets.—Pills containing chloral, bromides, ammonium chloride, potassium bicarbonate, camphor, and other drugs that change or deteriorate upon exposure to the air, should not be prescribed unless freshly made up for short use. Acetanilid tablets are eligible if broken up before administration. Arsenic trioxid and copper arsenite are the only salts of arsenic commonly available for pills or tablets. Bismuth should not be prescribed in pills or tablets. Dry salts of iron are better given in capsules instead of in pill form. Blaud's pills rapidly deteriorate. Old compound cathartic pills are apt to be very inert. Nitroglycerin tablets should not be long kept, and should be tightly corked. Salol pills or tablets are very slow of solution. Quinine sulphate pills are apt to become most slowly soluble.

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Aerophagia—The Cause and Clinical Significance.

Every case of flatulency is not aerophagia, nor is the latter ever caused by fermentation in the stomach, according to Dr. Douglas Vanderhoof (*Journal A. M. A.*, Feb. 26, '10), from whose convincing paper we abstract these salient points:

Aerophagia is a neurosis associated with loss of tone in the muscular walls of the stomach, so that the organ is easily inflated by air swallowed with food or between meals. It is entirely independent of the character of the gastric secretions, and occurs relatively as frequently in patients with an acidity as in those with an excess of hydrochloric acid. It does not depend on what the patient eats, but on the condition of the stomach nerves when he eats.

In the vast majority of instances what is expelled is nothing but atmospheric air—a fact proven by analysis. The most striking cases are found in hysterical subjects or persons with other neurotic stigmata. Cases are recorded in which the patient belched over 5,000 times in twenty-four hours, and the gas expelled exceeded 200 liters. By no conceivable process of fermentation could this be produced in the stomach.

This phenomenon of air-swallowing is well illustrated in the horse by what is known as *cribbing* or *wind-sucking*—one and the same condition and now recognized as a *vice* rather than a disease. Authorities are not agreed as to whether the air is taken in by a pure act of deglutition or by a process of sucking. It is well known that air is easily and frequently swallowed.

Most patients with aerophagia suffer from a functional disorder of the stomach, with which is probably associated a hyperesthesia of the gastric mucosa. Every case of flatulency is not due to aerophagia. Flatulency may arise from fermentation, especially from fermentation in the intestines, but very rarely is it the cause of "wind on the stomach."

The symptoms of aerophagia are those of the underlying functional or organic disease, plus the effects produced by the air. In very neurotic persons the air may descend only to the cardiac orifice of the stomach, or—in other instances—be forced through the pylorus and cause "bloating." In fact, aerophagia is essentially a symptom rather than a disease, but it is none the less important, clinically, that it be recognized.

The treatment of the condition, after excluding all organic diseases and correcting all possible reflex causes, consists principally in explaining to the patient that the gas he eructates is not due to fermentation, but that it is atmospheric air that he unconsciously swallows.

Following this explanation many cases get well over night, so to speak. To ply the patient with intestinal antiseptics and a restricted diet is a mistake. Roborant treatment is called for. Generally, improvement follows forced feeding with starches and sweets. The drug of greatest value is asafetida. Possibly its efficacy lies in the fact that patients stop belching after its administration because with each eructation they are reminded of the horrible odor of the drug. A good drink of whisky, taken undiluted, or a dose of aromatic spirits of ammonia, often relieves by stimulating the muscular walls of the stomach to contract and so expel the contained air. Other remedies that may be tried are chloroform water and turpentine.

Present Status of Stomach Lavage and Autolavage.

After thirty years of employment of lavage of the stomach we have come to resort to the procedure too indiscriminately—in many instances quite recklessly—Dr. Charles D. Aaron, Detroit, Mich., contends and hails with satisfaction the wholesome reaction that has set in. We are now recognizing well substantiated contraindications.

In his paper (*N. Y. Medical Journal*, Dec. 11, '09) Aaron emphasizes the danger of frequent and extreme distention of the stomach with needlessly large quantities of irrigation solution, while detailing the uses and abuses of lavage. We reproduce the following practical points:

Above two or three ounces of fluid are seldom required in one act. This may be introduced abruptly and immediately returned, the procedure being repeated four or five times in a single lavage.

Atony of the stomach is present in many patients accompanying disease of the stomach, heart, kidneys liver and lungs. In such the introduction of from one to five pints, as recommended by many text-books, is unsafe and uncalled for.

The other contraindications are cardiac affections, aneurysm of the aorta, advanced arteriosclerosis, cachexia, old age, pregnancy, etc. In some cases there is no necessity of examining the stomach contents in the presence, for instance, of a mitral insufficiency, when we know that the dyspepsia in these patients is due to functional insufficiency of the circulatory apparatus, causing a venous engorgement in the gastric mucosa. We

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know that digitalis or strophanthus has a better curative effect in such cases.

The rational employment of a stomach tube for a distinct purpose must be left to the discretion of the physician, who must weigh in each individual case the advantages against the disadvantages. The only serious indication for lavage of the stomach is in intoxications or in cases where it is desirable to rapidly empty and cleanse the stomach. It will, therefore, be most frequently employed as a symptomatic procedure, which, while acting as an adjuvant to the general treatment, has no curative action of its own.

Occasionally the mere mention of the washing out of the stomach with a long tube has a beneficial effect on nervous patients. Sometimes the mere threat of employing this treatment is sufficient to cause a goodly number of the symptoms to disappear, such as anorexia, eructations, vomiting, etc.

AUTOLAVAGE.—Autolavage is a form of stomach irrigation, which has been called physiological in order to distinguish it from the above. Here the use of the tube is not necessary. It is sufficient that the patient drink four to eight ounces of the irrigation fluid and then lie down on his abdomen supported on a somewhat hard resisting surface across the bed or on the floor. In this position let him breathe as deeply as possible. Fifteen to twenty deep respirations are sufficient to drive the contents of the stomach through the pylorus. This procedure may be repeated as often as necessary.

This method has a considerable advantage over the other, for by it the nourishment as prepared by the stomach is not lost and follows the physiological path. Besides, the patient will submit much more readily to it than to the manipulation of the stomach tube.

Infantile Paralysis.

Circular issued by the American Orthopedic Association and the American Pediatric Society in reference to acute epidemic polyomyelitis, and addressed to health authorities and boards of health:

Anterior polyomyelitis is, so far as known, a communicable disease, being communicated from one patient to another and also by means of a third person. It occurs in epidemics and tends to spread along the lines of greatest travel. There is reason to believe that it is prevented from spreading by quarantine, and with the very great prevalence of the disease in the summer of 1910 it is the opinion of this committee that it is essential that it should be made a reportable disease in all States in order that its presence may be detected and its spread guarded against.

Of particular significance are the so-called abortive cases, where indefinite ailments occur in children in communities where frank paralysis also exists. These abortive cases of infantile paralysis are undoubtedly a source of infection, and their record and study is of much importance. In a community where cases of infantile paralysis occur, cases of illness with sudden onset of fever and meningeal symptoms should be closely watched and regarded as possibly infectious. In such cases even recovery without paralysis does not establish the fact that the case was not abortive infantile paralysis.

All cases of infantile paralysis should be strictly quarantined, sputum, urine and feces being disinfected, and the same rigid precautions adopted as in scarlet fever. This quarantine should, in the opinion of the committee, last for four weeks in the absence of definite knowledge as to when the infection ends. Children from infected families should not be allowed to go to school until the quarantine is abandoned. The transportation or transfer of acute cases in public conveyances should be strictly forbidden. It would be very desirable to adopt provisional quarantine measures in suspicious cases in a community where an epidemic prevails. The report of all cases of infantile paralysis to the public health authorities should be enforced by law, and all deaths from this cause should be properly described and registered. A careful study of epidemics by public health authorities is strongly advised.

(Signed) ROBERT W. LOVETT, M.D., *Chairman.*
HENRY KOPLIK, M.D.
H. WINNETT ORR, M.D.
IRVING M. SNOW, M.D., *Secretary.*
Buffalo, N. Y.

Indications for the Removal of the Tonsils.

First, when they are large enough to act as an impediment to breathing, speaking or swallowing.

Second, when they are subject to repeated attacks of inflammation, causing sore throat, tonsilitis, or colds in the head.

Third, when there are enlarged glands in the neck following throat infections, especially in tubercular families.

Fourth, when there are symptoms, indicating the advance of a catarrhal process up the eustachian tube: as earache, ear discharge, lessened hearing and retracted ear drum.

Fifth, when the tonsil contains foul smelling cheesy masses showing retention of food, bacteria and degenerative products in the crypts.

Sixth, when the patient has had inflammatory rheumatism, or its near relative, chorea. The history of these cases shows that over ninety per cent of them are preceded by throat infections, and it is believed the causative germ enters through the lymphoid ring.—*G. McBean in Davis' Magazine of Medicine.*

Night Sweats.

For the control of night sweats in consumption the following is recommended by N. P. Barnes:

Atropinæ sulphatis	gr. 1-10
Agaricini	gr. xij
Picrotoxini	gr. ij

M. et in pilulas No. xij divide.

Sig.: One or two pills on retiring.—*Medical Fortnightly.*

We apologize to our readers for the appearance in one issue of the advertisement of the Oxygenator Company, which was sent to us from a reputable advertising agency, and was received too late to make investigation before going to press with that issue. Our objection is that it does not conform to the ethics of the medical profession and is out of place in a medical publication.

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Psychology and Fact as Relates to Phantom Tumors and False Pregnancy.

From the time of Hippocrates false pregnancy has been recognized. Literature upon the subject is meager and there has been a tendency to regard the condition as due to peculiar psychologic conditions or to hysteria. But those physicians of larger experience with these cases have been inclined to view the state as one caused by definite pathologic conditions. Medical men who have not been brought into contact with cases have failed somewhat to recognize that these cases are not all "notion" upon the part of the unfortunate subjects.

Recorded cases have frequently been preceded by statements of the condition occurring in the lower animals. It is quite well known that overfed bitches sometimes present symptoms of pregnancy and will occasionally go through the pains, accompanied by yelps and jumps, of labor and yet fail entirely to bring forth. The passage of time shows they were not pregnant at all. Elephants have been observed in the same deluded condition. From these facts it is argued that the psychologic factor is more apparent than real in human cases.

Women believing themselves to be pregnant are divided into two classes: those who are ignorant of the phenomena of pregnancy and who soon realize their mistake, and those who do know somewhat of the matter by experience, but who falsely believe themselves to be pregnant and who develop a train of symptoms that may delude their physicians as well as themselves.

Membranous dysmenorrhea is a condition frequently responsible for the symptoms falsely denoting pregnancy. Histologically the deciduous membrane of initial fetal life is very similar to the membrane of dysmenorrhea. Knowing how much the deciduous membrane has to do with the development of the signs and symptoms of pregnancy, we can readily understand how this pathologic membrane may inaugurate signs and symptoms of a similar character. Other conditions of the womb may cause a simulation of pregnancy, but the cases are not apt to be so typical.

That learned physicians are frequently deceived by these cases is a fact borne out by many instances. We are well acquainted with a case in which two eastern professors diagnosed pregnancy, besides three physicians local to the case. The woman had a deformed pelvis, and an abdominal section was actually done to the intense chagrin of these men, three of whom were mulcted with damages at the termination of the legal proceedings

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instituted. The talented author of a book upon the signs and symptoms of pregnancy once diagnosed as pregnancy a case he published with an account of the strange character of the fetal heart beat. The woman was not pregnant. Instances of the cases recorded might be given, but there is little to learn from them except that nature may lie with a straighter face than does a man, and that we all make mistakes.

From what we will take occasion to say a little later, one can readily see that mistakes can be avoided by etherizing the suspected case. Also it is well to be most careful as to the medico-legal aspects of these cases and well consider any operative suggestions. We are well aware that the physician who has never met a case of false pregnancy will complacently smile at the mistakes of others. Let him wait; he may have something to learn. Yesterday we examined a woman we expected to deliver four months ago. We confess we took the woman's own diagnosis at first, and there is a very heavy cushion of fat over the abdomen and the stethoscope fails to reveal a fetal heart sound. Nevertheless, it may be there. Certainly the other symptoms of pregnancy are found, but the woman, a multipara, asserts she felt quickening eight months ago; hence, we are not committing ourselves to a diagnosis.

As to phantom tumors, we have recently examined two young girls who presented symptoms of abdominal rather than pelvic character. Both suffered from typical hysteria, both have epileptoid seizures, and both have rigid abdominal walls. Neither one shows any temperature, and the general health of both is good. One of the girls has a markedly rigid abdomen, and the other looks like a woman eight months in pregnancy. The case is remarkable, and the tumor most persistent, yet *full anesthesia with ether resulted in full relaxation* and no sign of a tumor. The tumor returned so soon as the ether was recovered from. *Both of these girls have infantile wombs.* To our mind, these cases are suggestive of the influence of the womb upon the system at large to an extent probably sometimes discounted, and we believe that a study of cases of phantom tumor and of false pregnancy would usually result in revealing a material basis for the strange conditions.

Benign Tumors of the Penis.

There is very little danger of the intelligent physician mistaking a malignant tumor of the penis and considering it a manifestation of syphilis. But with reference to the benign tumors the same cannot be said. Lipomata or fatty tumors occur upon many portions of the body and rarely upon the penis. When they do so occur, there is little occasion to mistake the character of the growth except when a case presents for the first time, after the tumor is undergoing secondary changes. Ulcerated lipomata especially are puzzling to the physician unaccustomed to their appearance. An incision into the tumor will reveal its character.

Owing to their contained fluid, cysts are not commonly mistaken, but atheromatous cysts may occur upon the penis and may fail of diagnosis. Horns upon the penis occasionally occur in aged men, and are readily recognized.

Papillomata, or acuminate warts, upon the penis are commonly called venereal warts. This latter name should be dropped. Retained or decomposed smegma or other irritants may cause these warts quite independently of any venereal infection.

Owing to the wide distribution of venereal affections among men, we are very apt to jump to conclusions when we are consulted regarding a growth or a sore upon the penis. This organ is no exception to general pathology, and is subject to many non-specific affections. We should be careful that we properly diagnose them, and not only refrain from giving misdirected treatment, but also beware of doing an injustice to or needlessly worrying a sensitive patient.

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The Kind of Post-Graduate Work We Need.

In the catalogue of a Western post-graduate medical school, we read the following:

"The rapid advance in the standard and method of the medical sciences, the increasing stress laid on laboratory and other diagnostic methods, the continuous changes in treatment based on an increasing knowledge of pathology, have one and all placed the busy practitioner of a few years' standing under greater and greater strain in the attempt to keep up with the advances in knowledge. Many find the pace impossible for lack of acquaintance with basic subjects, not found in the curriculum of a few years ago. Men thus placed cannot afford the time to retake a college course, and are not much benefited by the average post-graduate school, which usually places the accent on advanced teaching in special subjects, whereas what so many need is a general review."

To prove the truth of this assertion, let any seasoned practitioner carefully study a modern pathology and he will find that to properly understand it, he must review recent text-books upon bacteriology, anatomy, physiology and medical chemistry. Furthermore, in our study of these and other fundamental subjects we missed their application, in large measure, and any of us will be amazed at the many practical points we can *now* see that we missed or that made but slight appeal in our student days. As an illustration of this, we have been reading Williams on obstetrics, a book often considered as ultra-scientific. While it is *so* easy to omit reading his sections upon embryology, anatomy and physiology, nevertheless we studied these sections carefully and have been rewarded with new viewpoints along practical obstetrics.

Aside from the laboratory work, any of us can review such books as Piersol or Morris on anatomy, Kirk or Howell on physiology, Parke or McFarland on bacteriology, and so on through the fundamental subjects. After such review we will be in position to properly assimilate laboratory and advanced clinical instruction or, if unable to go to a post-graduate school, to learn the points from our own patients that we were apt to miss before. One hour a day will reconstruct us before we are aware of it, and will fire us with a new ambition and arouse our latent possibilities.

Hay Fever Immunity.

Suggested by Dunbar's pollantin, one of our staff has been speculating as to the possibility of establishing an artificial immunity to hay fever. Most English and Continental authorities lay the emphasis upon certain grasses as etiologic to hay fever, while common opinion in the United States is to the effect that the common rag-weed is our greatest excitant.

The doctor is trying to separate from the mass of real and alleged hay fever subjects cases definitely ascertained to be sensitive to the rag-weed and has them upon a simple treatment, consisting of each subject selecting a patch of the plant and visiting it every day after the flowering spikes begin to develop. Each patient is directed to pinch out a developing spike daily, inhale it and chew one or two spikes and swallow the juice. From day to day, as the plant develops, it is assumed that more of the irritating element exists and so the dose is not materially increased. Since the rag-weed, or ambrosia artemisiæfolia, is possessed of sterile heads or spikes and the fertile flowers are solitary or clustered toward the base of the spike or racemes or in the axils of the upper leaves, there is no pollen developed so early as is common with plants with fertile spikes. For this reason, the flowering period is long and the experiment may be long continued, but both fertile and sterile flowers should be used.

No claim is here made as to the efficiency of the treatment, but the suggestion is made that the experiment is so easily made

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that any of our readers, who care to try the method, may determine for themselves whether or no there is anything in the idea.

Therapeutic Suggestions.

There are many cases of partial or imperfectly developed cretinism that, were they early recognized, would be largely restored by the thyreoid powder. The doctor should be informed of the symptomatology of this disease and should be most careful that he does not overdo thyreoid treatment. Half grain doses may be better than one grain ones, and the drug should never be *continuously* administered.

During the hot weather croupy babies should be carefully watched. While croup is seldom seen in the summer time in most regions, there are others where the nights are cool or foggy and spasmodic croup frequently occurs. The danger is that these babes may be unduly exposed to winds or stuffy rooms where the covering is thrown off and they develop bronchopneumonia.

Do not be too quick to make a diagnosis of "rheumatism" in the case of a babe. We have seen three cases recently that were suggestive along this line. All three were declared to be "rheumatism." One child soon developed an abscess near the knee, due, probably, to an unnoticed bruise. The second child had pseudo-hypertrophic paralysis. The third babe was very young and there had been a difficult breech delivery resulting in an unnoticed shoulder dislocation.

It appears to be the common idea that alkaline urine seldom occurs in young subjects. A more general use of litmus paper, especially when the urine contains much mucous, will show alkalinity in the urine of many young persons, and especially among young men who have been "cured" of gonorrhea. We have noticed that adequate doses of benzoates, given to restore acidity, will frequently produce cerebral symptoms of an annoying character, and they should be carefully administered. Try to pick up these cases of alkaline urine early.

It has been our fortune to encounter more than our share of cases of placenta previa, and we have concluded that one of the greatest of practical difficulties in the management of these cases is to secure rapid dilatation of the uterine os. It is true that it may be secured mechanically, but in a recent case we gave an emetic dose of ipecac that promoted relaxation and appeared to have some influence in restraining hemorrhage. Lobelia has been long known to promote dilatation, and we have used it in strong subjects, but consider it too depressing for many women. Gelsemium has been used for this purpose, but should be avoided, since its action is long continued and may result in post-partem hemorrhage.

We commend as a medicine and a food the *ripe* olives put up in quart tins and glass fruit jars in California. During the hot weather they largely take the place of meat and possess a food value far in excess of the commonly sold green olives. As they contain a large proportion of olive oil in a digestible form, they may be freely eaten in most any case in which olive oil is indicated. We find that patients consider them insipid at first, but soon come to relish them more than they do the green ones, which are almost devoid of oil. We have known persons to eat them in quite large quantities without any but good results.

Unauthorized Use of References.

We, as well as many other medical journals, received from a hitherto reputable advertising agency an order for the advertising of the Jaroma Company, advertising a vegetable hypnotic. To our surprise, the advertisements which appeared in the medical journals soon began to be quoted in advertising to the laity, as if they were editorial expressions of those medical journals. Of course, the public have no means of knowing of this fraudulent practice, but accept the quotations as they seem. The advertisement of the Jaroma Company will not appear in THE MEDICAL COUNCIL again. We thank Dr. Henry W. A. Pechmann, of Hulburton, N. Y., for kindly furnishing us with the information regarding the practices of this company.

Is marriage a failure? Yes, if the individuals tied together are weak, wicked or wobbly. No, if those who agree to the nuptial knot are strong, noble, unselfish and of the right moral fiber.—*The Searchlight Philosophy.*

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Original Articles

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We are not responsible for the views expressed by contributors.

Sentences, like sunbeams, burn deepest when most condensed.

Early Operation for Psoas Abscess and the Treatment of Hip Joint Disease.*

By JAMES K. YOUNG, M.D.,

Associate Professor of Orthopedic Surgery at University of Pennsylvania; Professor of Orthopedic Surgery in Philadelphia Polyclinic and College for Graduates in Medicine, and Clinical Professor in Orthopedic Surgery at Women's Medical College, etc.

The history of psoas abscess is so frequently one of prolonged suppuration ending in the death of the patient that any operation that will cure these cases is worthy of presentation to this society.

The operations which are usually performed are not undertaken until the disease has advanced into the pelvic cavity, and drainage is made in the groin with counter drainage in the loin or through and through drainage is established, and this is continued for many months. A little over twenty-five years ago Sir Frederick Treves introduced an operation for the evacuation of psoas abscess by posterior incision; this operation was employed quite extensively both upon adults and children, being used in unsuitable cases and finally fell into disrepute. For the past five years I have been performing this operation in modified form, adapting it to the disease as it occurs in children. An incision 3 inches in length is made parallel with the posterior superior spine, and about 2½ inches to either side, the skin and superficial fascia are divided, the sheath of the erector spinal muscle is divided, exposing the quadratus lumborum, which is also divided, the lateral or transverse process of the third lumbar is located and the attachment of the psoas muscle to this is separated, a blunt instrument is introduced into the psoas muscle and the abscess drained. It is washed out with boric acid solution and drainage is maintained only for a short time. The indications for the operation are contraction of the psoas muscle, high temperature, tenderness point over the transverse process of the third lumbar vertebra, and leucocytosis. An X-ray should always be taken to locate the disease in the vertebra and all known clinical methods should be employed, including tuberculin tests to thoroughly establish the nature of the disease.

The patient exhibited this evening is a boy 7 years of age, whose family history was negative for tuberculosis. He had had at different times the diseases of childhood and, in April, 1910, he complained of a pain in his right hip, with contraction of the thigh. Upon admission to the Polyclinic Hospital he had a temperature of 102 degrees, with a leucocyte count of 18,000, the symptoms were characteristic of early psoas abscess and the operation described was performed. The packing was removed on the eighth day and the wound was healed on the twelfth. He has worn a spine brace since, and his recovery has been uninterrupted.

The Treatment of Hip Joint Disease.

For fifty years past the medical profession have discussed the relative merits of traction and fixation in the treatment of hip joint disease, the discussions upon this subject have been long and bitter and every orthopedic surgeon of reputation has expressed his view as to the relative merits of these two factors in the treatment of this disease. About fifteen years ago I came to the conclusion that the best results would be obtained by the combination of fixation with traction, and published at that time a description of a splint, which was made of plaster of paris, with buckles attached so that the limb might be thoroughly fixed and traction applied. The results obtained by this apparatus were good, but were not as good as the splint which I have used during the last five years and which has added to it a foot piece by which traction can be more readily applied. This foot piece also prevents lateral rotations of the foot and limb. It consists of a pad and thigh and calf pieces made of hard leather over a plaster of paris form. These are connected together by a steel bar, which runs down the back part of the body and leg and is attached to a foot piece with a leather covering. An extension is provided for between the knee and ankle, and two perineal straps are used. The splint is made from the cast of the patient taken in a standing position and includes the entire body on the affected side from the costal border to the tips of the toes. The

*Read before the Clinical Meeting of the Pediatric Society June 13, 1911.

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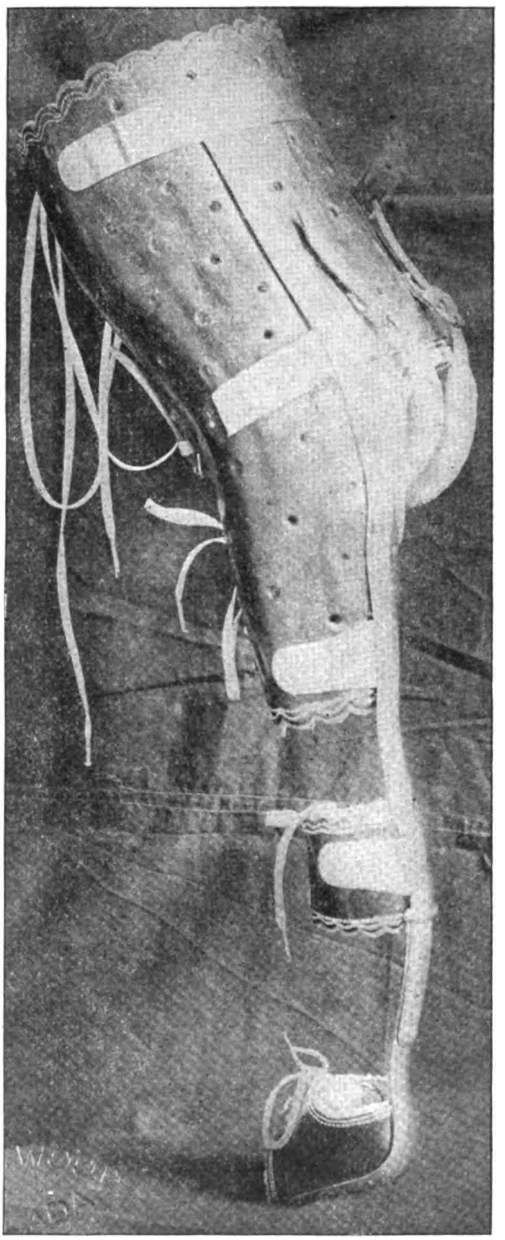
brace is applied with the patient lying down, and the foot is placed in the foot piece so that there is one-half inch between the foot and the bottom of the plate. The leather



body part is laced up and perineal straps are tightened, traction is made upon the leg and the foot portion is fastened with laces. This causes the desired amount of traction; the thigh and calf portions are then laced. Crutches are used and a high shoe two and one-half inches in height is worn. With this splint the patient is able to obtain all the beneficial effects of fresh air and sunshine. After the patient has worn this apparatus from one to two years and all the acute symptoms have disappeared and the X-ray shows that the hip joint has recovered, this brace is replaced for a convalescent walking hip splint after the Shaffer pattern. This consists of a pelvic band with a ratchet bar passing from the pelvic band to the foot piece and containing lock joints at the hip and knee, with broad leather bands about the thigh and calf and perineal straps. The foot piece fits into an ordinary shoe and the weight of the body is sustained in walking by the perineal straps so that the jar is transferred from the foot directly up to the pelvis without passing through the hip joint. Counter-irritation is used over the joints throughout the treatment and tonics are used, together with improved diet. The treatment lasts from two to four years, according to the severity of the disease, and the results obtained by this combined method are more satisfactory than by the use of other splints. For dispensary practice the leather portions may be made of plaster of paris and the foot piece can be attached so that such an apparatus can be made with very little expense.

The patient presented this evening illustrates well the effect of this apparatus in the treatment of hip joint disease. The patient is a boy 10 years of age suffering from hip joint disease. When first seen he had all the typical symptoms of the first stage, and the disease was verified by an X-ray picture. He was placed in bed with traction for two weeks while the splint was being made. The combination splint was worn for one year; X-ray photographs were taken every six months. One year ago there was no pain, no spasm, no limitation of motion and the X-ray photograph was satisfactory. A Shaffer convalescent hip splint was applied, and this has been worn for one year. This was removed two weeks ago and his condition at the present time shows a perfect recovery from hip disease. The test for a perfect recovery in this condition consists in the movements of the hip being perfectly normal. The first test is made with the patient standing and placing first the sound foot on a chair to see the normal amount of flexion of the thigh, then the affected limb is carried through the same movement. The second test is made with the patient standing, the knee is flexed and abducted until the foot

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can be placed on the upper third of the sound thigh. The patient should also walk without any limp. The apparatus exhibited this evening is one that is very satisfactory both in its use and in the results obtained, the cases usually recovering without abscess and all the early cases recovering without any limitation of motion or any ankylosis.

Pneumonia.

By W. N. MacArtney, M.D.,
Fort Covington, N. Y.

For some years past persistent efforts have been made, through the columns of our popular magazines, to educate the public to a just appreciation of the ravages of tuberculosis and of the necessity of proper treatment both prophylactic and curative. This campaign has certainly been productive of much good. A conspicuous feature of these articles has, however, been the tall columns or other diagrammatic representations showing the comparative mortality of the various diseases, and very graphically indeed the relative insignificance of many of the much dreaded diseases, such as diphtheria and smallpox. One noteworthy feature of these illustrations is the omission in very many instances of any reference to the mortality from pneumonia, which is a close second to that of tuberculosis. This omission can hardly be an oversight since it is a condition with which we are all unfortunately only too familiar. Can it be that the profession is a trifle sensitive upon this subject? There are two recognized ways of preserving a discreet silence upon any given matter. One is to keep your mouth shut, the other is to talk volubly and persistently about something else. Both methods seem to be popular in the instance referred to.

Pneumonia stands second, at times and in certain localities first, in the list of fatal diseases. Until we have made some real progress in its treatment and are able to show a reduction in its mortality due to present day methods over those in vogue fifty or a hundred years ago, until we can come to some reasonable agreement among ourselves as to the proper method to pursue, whether we shall bleed or use cardiac sedatives on the one hand or early and persistent stimulation with cardiac tonics on the other hand, whether we shall use cold compresses or hot poultices, agree as to whether it is strictly a self-limited disease over which we have no control or, on the contrary, one which can be aborted, until we can decide between the open air enthusiast and the avoid-all-drafts granny, between over-medication and utter nihilism, between the various forms of specific serotherapy, it is perhaps wiser not to rush into print and lay bare our shortcomings.

I may as well state in the beginning that my views upon the subject of pneumonia are unorthodox, perhaps worse. I don't expect you to agree with me, but I feel under no great obligation to apologize for my heresies so long as the mortality rate remains where it is. Moreover, I shall not weary you with a review of its history, symptoms, course, diagnosis, etc. That would be threshing out old straw. I shall take for my text a brief statement of one of our most eminent men, William Osler. I merely quote Osler because he gives, so far as I know, the most concise statement of the dominant view. Osler says, and I believe I quote his exact words: "Pneumonia is a self-limited disease, and runs its course, uninfluenced in any way by medicine. It can neither be aborted nor cut short by any known means at our command." We all concede Doctor Osler's ability, but to my mind this statement has a striking similarity to the famous one made by the student in natural history, who defined a crab as "a little red fish that walked backward"—a very excellent definition, but for the facts that a crab is not a fish, is not red, and does not walk backward.

I maintain not only that pneumonia *is* influenced by medicine and that it can be and frequently is aborted by known means, but —bear with me here—that it is not a disease at all. Not a disease, but a condition resulting from other diseases. Moreover, I strenuously object to this statement of Osler and others, that it is never aborted as being wholly unwarranted and untenable. Obviously, a single authentic case in which pneumonia had been cut short by any known means would knock out such a statement absolutely. To prove, *per contra*, that it has never been aborted, it would be necessary to bring in evidence every case from the time of Adam to the present day, a thing manifestly impossible on the face of it. Dogmatic assertion is not argument. it is merely contradiction. Let us discriminate.

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Time was, in the old days of medicine, some twenty years or so ago, when dropsy was a disease, when inflammation of the bowels was a disease and a black cat poultice a fairly orthodox treatment therefor, when a dozen different infections were very conveniently classed as erysipelas, when rheumatism was a term applied to a host of maladies of diverse origin, and the treatment of these conditions was correspondingly unsatisfactory. Typhus and typhoid, erysipelas and erysipeloid are no longer confounded.

What Is Pneumonia?

A condition of pulmonary consolidation, one of the commonest and most fatal complications of epidemic influenza. The element of greatest danger in whooping-cough and measles. A common accompaniment of laryngeal diphtheria, an incident in the final stage of chronic nephritis. The commonest cause of death in the aged, the last phase of most chronic and debilitating diseases. An accompaniment of the tubercular process in the lung. A complication often seen following fracture of the ribs, even severe contusions of the chest wall. An accident following etherization and the inspiration of food or septic material. An epidemic in jails and almshouses. A frequent and often unexpected finding in post-mortem work. A common complication of apoplexy, of diabetes, or senile fracture of the neck of the femur, of embolism, of gunshot wounds of the lung, of the later stages of typhoid and other continued fevers, of acute alcoholism and delirium tremens. We talk about lobar pneumonias, pleuro-pneumonias, broncho-pneumonias, tubercular pneumonias, syphilitic pneumonias, hypostatic pneumonias, the recurrent pneumonias of chronic valvular disease, of the cases resulting from obstruction to the pulmonary circulation, from various infections, from shock, exposure, depression, from any old cause, and all forsooth because a pneumococcus, or mayhap it is a bacillus of Friedlander, or of influenza or typhoid, or a staphylococcus or a streptococcus is hibernating between our last molar and our—no, not our *wisdom* tooth, but doubtless the one in front. And we call this a disease.

Once when a hospital interne I had a patient sent into my wards by a physician with the diagnosis of "inflammation of the arm." I took a humorous view of this at the time. Later, in view of our attitude in regard to pneumonia, it seems a fairly creditable diagnosis. Pneumonia may be a condition, an inflammation, a coagulation, a plugging up of pulmonary vessels and tissue, a complication of some disease, a morbid state, a pathological lesion, what you will, but not in all its varied forms a distinct disease, else is swelling of the ankles a true disease. Peritonitis is a localized inflammatory process possessing certain distinguishing features, but its underlying causes are now known to be as varied and as numerous as the contents of the abdomen and the germs which may infect them.

Is Pneumonia a Germ Disease and Contagious?

Undoubtedly so at times. The pleuro-pneumonia of domestic animals is unquestionably so, and yet, in this instance, is the disease pneumonia, pure and simple, or an acute general infection in which pneumonia is a fairly constant lesion? Is this the same "disease" as senile pneumonia, or the pneumonia so frequently seen as an accompaniment of the grip? That pneumonia is ordinarily contagious is opposed to the clinical facts which we have all of us had ample opportunity to observe. I repeat that there are undoubtedly pneumonias due to infection, but that this does not by any means prove pneumonia, *per se,* to be contagious. The evidence so far adduced only goes to prove that it is a condition often resulting from infection, and not necessarily an infectious disease by itself in any proper sense of the term. Pneumonia may be a specific germ disease due to pneumococcus infection, but the evidence is insufficient to cover the established facts in more than a small proportion of cases. If pneumonia is an acute infection of the lung due to the direct action of the pneumococcus, are the pneumonic conditions in which other micro-organisms predominate, false pneumonias, pseudo-pneumonias, imitation pneumonias only?

Again, if the pneumococcus is capable of causing not only pneumonia and bronchopneumonia, but arthritis, abscess and cellulitis, peri- and endocarditis, meningitis, salpingitis, pleuritis, empyema, keratitis, tonsillitis, otitis media, often primary, are these not phases of the infective process rather than the disease itself?

In a recent case of mine the patient during an attack of grip had a bronchopneumonia, chiefly of the left lung; this clearing up, she had an acute nephritis. As soon as this subsided she developed an ileo-colitis.

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Following on the heels of this she had an attack of jaundice. While still in bed and in charge of a competent nurse, the jaundice cleared up, but was very promptly followed by a pleuro-pneumonia in the opposite lung to the one first attacked. It was a knockout blow and she died from this complication. Is it not apparent that the influenza bacillus attacked these various organs seriatim, as it were? Can we call these different invasions separate diseases? Or was the case not one of influenza or diplococcus infection and the pneumonic attacks mere incidents attending the same.

In the light of modern knowledge can we logically still continue to call pneumonia a disease rather than a complication of certain germ infections, vascular disturbances, or local injuries. In my judgment, so long as we do so, so long shall our treatment remain a hodge-podge of empiricism with a correspondingly large mortality that we should perforce conceal from the public as best we may.

Is the pneumonic condition uninfluenced in any way by medicine? I ask you if, in your sober judgment, you believe this? If so, it is high time that you be frank with your patients, to tell them your honest conviction, that you cannot help them, and turn them over to the Christian Scientist, or to an All-wise Providence, or, better yet, to both, if they can be possibly harmonized.

Can It Be Cut Short, Jugulated?

Now we come to an old battle-ground—with the fight still on. To those of us, and the number is not few, who maintain that pneumonia can frequently be aborted, and cite case after case to prove our assertion, the eminent scientist has but one answer, an answer stereotyped and always ready. I have heard it hundreds of times. It is always the same. It is effective, and withal a trifle dogmatic, I will not say discourteous. *Error in diagnosis.* Now will you be good. We are very promptly put where we properly belong, in that large class of well-meaning but wholly incompetent individuals. How can we argue the matter? We have absolutely no ground left to stand upon. We are ruled out of court. Post-mortem records show no abortive cases. We are not allowed to assassinate a few choice cases for purpose of demonstration. So there we are undeniably in the front row of the utterly incompetent. What business anyway have we poor, benighted, half-educated, misguided, deluded and wholly mistaken individuals to actually argue with an established authority, one who has risen by sheer force of intellect above all human fallibility. Doubtless we misguided people actually believe that we aborted that pneumonia; nay, worse, that we actually had a case of pneumonia to start with when it was obviously only a case of congestion. Mere hallucination of the untrained mind. Not to be taken too seriously. We should be properly snubbed and let our betters, who have *heard* about our cases, but have not seen them, who have *heard* about our methods of treatment but have not been so unwise as to try them, pass final judgment. It only remains to modestly suggest, indirectly, of course, that so long as the mortality of pneumonia under orthodox treatment remains at the usual 20 to 30 per cent., the subject is not one for further discussion. It is more polite and tactful for the said misguided individuals to change the subject. Even a high authority is sometimes sensitive. Don't harrow up his feelings by referring to his own 30 per cent. mortality. True, he has just made you feel like 30 cents, but let it pass. You've only gotten what is coming to you. If theory does not accord with the facts, calmly push the facts aside. This is the privilege (sometimes) of the truly great. Error in diagnosis is, like the policeman's billy, always handy, and a great silencer.

But after all, denial is *not* argument, and to call the other fellow an ass or a fool, or its more euphemistic equivalent, incapable of diagnosis of one of our most common maladies, is an old, old way of controverting your opponent, but it fails with some of us to put at rest an important question.

Can Pneumonia Be Aborted?

Some years ago I had a long series of pneumonia cases in which a large proportion was cut short and actually aborted by means of vigorous and protracted diaphoresis. Later experience with this method has confirmed its efficacy in a certain class of cases and to some extent defined its limitations. It is still in my hands the most effective treatment of gripal pneumonias, if seen within the first twenty-four or thirty-six hours. Briefly, I sweat these cases. Sweat them for convenience with steam generated by means of hot, wet bricks, wrapped in dry cloths and placed around the patient. This is simply a vapor bath always at hand, readily managed and controlled. Commonly I give an adult pa-

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tient 10 grains quinine and 10 of Dover's for the initial dose, repeating the Dover's at intervals of from three to six hours, with smaller doses of the quinine. I sweat them profusely, unremittingly, for twenty-four hours or longer; sweat them until the bedding is saturated. I keep their arms snugly under cover, for you cannot properly sweat a patient if he is allowed to have his arms out. Many have tried this method and succeeded, as a rather voluminous correspondence following the publication of this method would show. Others have failed. The commonest cause of failure is insufficient sweating. To sweat them for a few hours, to dry them off and change their clothing and bedding is useless and only discredits the method. I consider it essential that they should lie in their damp clothing until it is dried out by the body heat. Usually the temperature will reach normal within twenty-four hours.

To illustrate: A man, large, plethoric, weighing 225 pounds, was taken recently with the grip. He had a temperature of 101, pulse 85, respiration 18. Lungs clear, General aches, cough. During the night following my visit he was taken with a hard chill and a severe pain in the right side of his chest. I saw him about twelve hours after the chill, on my second visit. He then had a temperature of 105, pulse 122, respiration 36. A short, loose, hacking cough, with a rusty tinge to the sputum. A marked crepitant rale at the base of the right lung. I sweated him and on the following day his temperature reached normal, pulse 70, cough and pain all gone. The symptoms did not recur. Error in diagnosis again. Congestion probably, particularly if you are accustomed to wait for evidences of marked consolidation before making a diagnosis of pneumonia. But what would this case have been in another twenty-four hours under the customary methods of treatment? Where does a congestion begin, and where does it commonly end? But these cases do not all abort. The treatment is not always carried out thoroughly in the absence of the physician.

There is one warning to be heeded. If your patient lives at a distance, leave a thermometer and instruct those in charge as to its proper use. In a certain proportion of cases, fortunately rare, sweating does not take place and the temperature may shoot up rapidly to an alarming and dangerous height. Given a hyperpyrexia of this kind, and it is imperative that the patient be promptly stripped and sponged steadily and rapidly with warm water and soda or with alcohol and water all over the body, rolling the patient first on one side and then on the other, and using just enough water to keep the skin constantly moist, remembering that it is not the direct cooling action of the water, but the effect of rapid surface evaporation which most effectively reduces the temperature. If properly performed such a sponge bath is quite capable of reducing the temperature of a pneumonic hyperpyrexia from 108 to nearly normal by a half hour's active work and with only the happiest effect. In the comparatively few cases coming under my observation, several of which occurred in the same family, there was no subsequent rise in temperature and the cases went on to a good recovery. I had two unexpected deaths from pneumonia in which I attributed the fatal result, correctly or incorrectly, to an unrecognized and untreated hyperpyrexia occurring suddenly in my absence.

But certain cases will not abort. These must be treated on general principles. The danger is chiefly heart failure, and primarily a right heart failure. There are many things to remember. Upon leaving the left heart the blood circulates through the body and comes back to the comparatively thin-walled right heart, from which it is sent through the lungs and back to the left heart once more, in a sort of figure of eight loop, and the obstruction in pneumonia is in the lesser loop or pulmonary circuit, therefore the strain is thrown upon the relatively weak right heart. What proportion of the subsequent right heart failure is due to direct obstruction to the blood stream in this lesser loop, to acute dilatation, to simple heart tire, to venous engorgement from damming back of the blood in the vena cava, to deficient oxidation, to parenchymatous degeneration of the cardiac muscle, to the poison of toxins generated by the ineffective agent, to exhaustion of the cardiac ganglia, is difficult to say. And how shall we best combat these conditions? What is the action upon the separate and distinct bronchial and pulmonary circulations and upon the right heart, as distinguished from the left, of such remedies as strychnia and digitalis on the one hand and of veratrum, aconite and nitroglycerin on the other? And, clinically, why does the robust, plethoric man with a strong heart succumb more readily than the slender and

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anemic school teacher? It is more readily explainable why pneumonia is fatal directly in proportion to the amount of arteriosclerosis present. Even the mechanical aspect of the matter seems sufficient.

In the early stage stimulation may be often withheld to advantage. If you were driving your horse on a hard, swift journey of some length you would not put him under the whip for the first few miles. You would let him get his so-called second wind. The heart may sometimes be well sustained by being put under control and lessening its labor, by steadying its wild action, by dilating the capillaries and those pulmonary vessels which are still permeable in the unaffected portions of the lungs, establishing as it were a collateral and compensating circulation. Why not open the way, instead of butting blindly against a closed door? Little is achieved thereby, but a sore head. Why not equalize, so far as we know how, the pulmonary circulation, calm down the overexcited heart, and restore the vascular equilibrium so far as we may, saving stimulation for the hour of need? Then push it. And, above all, treat the underlying condition, treat the pneumonia, not as a specific disease, but as a grave complication.

In children, prolonged diaphoresis is difficult to obtain under ordinary management such as we have to contend with during grip epidemics. They do not submit tamely; they do not bear Dover's well, do not take kindly to quinine in a sufficiently soluble form. I have been accustomed for a long time in these cases to use and rely upon Abbot's defervescent granules of aconitine, veratrin and digitalin, and for many years have had no mortality from pneumonia in children and in young people. In elderly cases I do not use these agents.

Pneumonia shows a marked tendency to terminate by crisis. The text-books assert that this usually occurs from the sixth to the tenth day, which is contrary to my experience. I have seldom seen a case run beyond the sixth day unless there was a fluid effusion, an extension of the pneumonic process, or the pneumonia was of tubercular or some atypical origin. The cases which do not terminate by the sixth day are commonly cases of double pneumonia (in which the onset in the second lung came on later), cases of pleuropneumonia, or of purulent infiltration.

In the late stages of certain cases blueness of the nails and a general duskiness appears. We have all seen many of them, and I know of few more unpromising conditions than a pneumonia, which becomes on the sixth day "rattley" and cyanotic. Stimulants here are too late. Atropine will check the pulmonary edema, but the patient dies nevertheless. Oxygen is commonly of but temporary service. This one might expect. In pleurisy with effusion one lung may have its function practically abolished and the other be seriously compressed, yet oxygen is seldom called for. The trouble lies deeper than mere deficiency in oxygenation. These cases go from bad to worse and frantic stimulation, the desperate whipping up of an exhausted heart, is not indicated so much as relief from its load. In these desperate cases the only remedy which has given me results worth while is free venesection. Adrenalin is worthy of trial.

Whatever plan of treatment is followed we shall meet with a certain proportion of failures, particularly in the aged and largely in proportion to the amount of arteriosclerosis present. But a 20 to 30 per cent. of failures is an indication of something radically wrong, some unrecognized factor in the condition we are dealing with, some Egyptian darkness as to the morbid processes, which constrains us to treat it as a self-limited disease and helplessly stand by and allow it to run its course.

Is it not time that we abandon a few more medieval absurdities and among them the idea that all inflammations and consolidations of lung tissue are due to the same cause, and that pneumonia is a sufficient diagnosis for a group of morbid conditions having admittedly certain clinical signs and manifestations in common, but on the other hand occurring in a multitude of diverse conditions and having no common etiological factor as yet definitely demonstrated? A fuller study of some of the questions referred to is essential and, in my humble opinion, any treatment of pneumonia based upon the assumption that it is a specific disease rather than an intercurrent complication of some definite morbid process or infection is not only unscientific and at variance with the established and well-known clinical facts, but must of necessity be accompanied by the present wholly excessive mortality.

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Enteric Fever of the Hot and Mild Zone —Some Research Work Done Recently on Enteric Fever.

By S. R. KLEIN, A.M., M.D., Ph.D.,
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The home of enteric fever is the middle and southern part of Asia, also South Europe. *Real enteric fever* I never found in this country. Typhoid fever, appendicitis, cancer, tuberculosis of the bowels we may find in America in 50 per cent. of the cases, but the real enteric fever is a specialty of the countries mentioned above. The most valuable paper on this subject was read by Dr. Roberts. He believes that the Indian possesses a natural immunity of a twofold nature. It is, in part racial, due to anatomical differences in the intestine; for, as he points out, both the large and small intestines in natives are, in many instances, considerably longer than in Europeans. He cites a case of a Mohammedan in whom both guts combined totaled 50 feet. Further, the intestinal walls in natives are thicker and more muscular, and Peyer's patches are not so much in evidence. The other factors operative are: diet, habits, general surroundings and adaptation of the human organism to the disease, causes which are most prevalent. As regards *habit* and *dietary,* there is a big difference between the people living in the *hot* and those living in the *mild* zone. The following chart shows exactly under which conditions the Southern and the Northern human being respectively live.

The native of the hot zone eats cold and dry food, which is bulky and coarse, with much waste; vegetable grains, cereals and pulses, which have large cellulose content, low proteid and fat content. The food is very partially cooked, plain and monotonous from day to day. The meals are infrequent, twice daily, with long fasts, mastication generally good; the majority eat to live; they live and work in open air; fecal evacuations twice daily; large, 10 to 12 ounces, completed by squatting; strain on stomach and large bowel.

The European, living under the mild zone, eats hot and fluid food, which is concentrated and soluble; animal food, with high proteid and fat, which is thoroughly cooked and sophisticated; the food is very mixed and varied. The meals are frequent, taken four to five times a day. The majority live to eat. The life is sedentary, indoor. Fecal evacuations small, 5 to 6 ounces; constipation rife. Purgatives very often used. Strain on stomach and intestines.

The reaction of the tissues against bacillus dysenteriæ, in its various forms, may confer local immunity against the closely allied bacillus typhosus. There was a great epidemic about ten or eleven years ago in Pe'cs, Tuenf-Kirchen, Hungary. Nearly 50,000 people got sick. The water of the River Danuvius became somehow infected, and the dysentery broke out. There was no doubt that those persons who had been suffering from dysentery did not get the typhus at all. But otherwise the bacillus typhosus was very strong, and the result of it was six to seven thousand cases with —*exitu letali.*

Levy and Kayser record the results of the bacteriological examination of the body of a person who was known to have been a typhoid fever "carrier" during life. The patient, who was in an asylum, must have harbored bacilli for several years and had reinfected herself from the gall bladder or bile ducts.

Nearly twenty years ago there were, as well as I can remember, in the famous Nothnagel Clinic of Vienna four or five cases of *miserere mei.* Each of the patients had dysentery previously. One died, three of them escaped death. Regarding the typhoid bacilli, they can be cultivated from the blood clot of specimens sent for a Widal reaction, and this has been confirmed, good results being got by spreading the clot on an Endo or Drigalski plate.

Zeidler records his results with the bile method, using thirty drops of blood to 5 c.c. of sterilized ox bile, incubating at 37° C., and plating out on agar or the malachite agar of Loeffler. He concludes that, from the fourth day of the fever onward, both in mild and severe cases, the presence of specific bacillus in the blood can be demonstrated, and that this method is superior to all others, being the most certain, the most speedy, and, when positive, absolutely reliable, while it is at least as simple as the Widal test.

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Remarks on Eclampsia, With a Report of Two Cases.

By JAMES STRICKER RAUDENBUSH, M.D.
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Of the five leading pathological obstetrical conditions — hemorrhage, eclampsia, sepsis, placenta previa and ectopic gestation —eclampsia is second in importance and serious consequences. A case of severe postpartum hemorrhage will, of course, surpass one of eclampsia, as in hemorrhage the opportunity to administer relief to the patient is limited, while the latter gives time for therapeutic measures, except in the "fulminating form" or "acutest septicemia." Placenta previa and ectopic gestation also generally permit time for proper operative measures.

Eclampsia may occur before, during or after labor. The eclamptic seizures, or convulsions, are epileptiform in character.

As to the cause, it is not clear to-day whether it is intra-uterine (fetal, syncytial, etc.), or extra-uterine (organic disease of the mother, as of kidneys, liver, etc.). We do know, however, that it is due to *toxins in the system,* and that the toxemia is present when the emunctories (kidneys, bowels, skin, etc.) are sluggish or inactive.

Referring to the prodromal conditions, usually edema of the ankles and albumenuria appear early, yet they by no means always indicate eclampsia. But when, in addition, the patient has gastric pains, frontal headache, edema of the eyelids, disturbances of vision, and the urine shows casts, eclampsia may be imminent. Hirst claims that high blood pressure in the latter half of pregnancy is an "invariable precursor of eclampsia." A decrease of urea is considered suggestive by Davis. Edgar and the American Text-Book of Obstetrics both emphasize the great danger signal of decrease of urine with increase of albumen. Garrigues states that edema of the lower limbs may not be significant, but when it occurs in the hands and fingers it becomes suspicious. Personally, I have noticed that restlessness, vomiting and mental disturbances are also important prodromal symptoms. Jewett and others declare that the majority with these symptoms will have an onset of eclampsia, but they also state that an occurrence of "perspiration and diuresis" prevents the condition and is followed by "refreshing sleep" and "good appetite." The prodromal symptoms may be of short duration or may be absent.

I shall refer briefly to the prophylactic treatment. This consists, first, of *elimination,* and, second, of the *prevention of formation and accumulation of toxins.* Elimination by the bowels is effected by the use of magnesium sulphate, magnesium citrate or the mineral waters. Elimination by the kidneys is promoted by diuretics. Personally, I use Basham's mixture, f3ii q. d., or oftener if necessary, and if this will not clear the urine, I use nephretin, a preparation which has always helped my patients, and so far eclampsia has not followed its use in my experience. Elimination by the skin is accomplished by hot packs.

The frequency of urinalyses depends upon the severity of the patient's condition.

I do not give nitrogenous foods. I find only a pure milk diet is permissible in marked cases, the least deviation often causing a return of toxic symptoms.

From my observation the attack begins with twitching of the eyelids, the eyeballs roll, the pupils are at first severely contracted; later they become dilated (pinpoint); the eyelids become fixed in most cases and the eyes stare upward.

Soon jerky contractions occur, the jaws are firmly set and frequently the patient bites her tongue, and the froth which is present in these cases becomes bloody. The face finally becomes extremely cyanotic.

The neck muscles are also thrown into spasmodic contractions, and the veins stand out prominently. This produces severe cerebral congestion. The head is tossed from side to side, but I have noticed it thrown to the right more frequently. In severe cases opisthotonos is present.

The clonic and tonic contractions of muscles also extends to the trunk and extremities; the respiration is interfered with and may be temporarily suspended or jerky and noisy. The arms may be extended, or flexed on the chest, but the thumb is always under the fingers across the palm. The legs are usually flexed. The whole body is thrown into jerky convulsions. During this time the patient is unconscious, yet may cry out. Some patients are conscious between the convulsions, but I have seldom seen this; even when they seem to answer questions correctly, I find later that they were not fully clear mentally and remembered nothing. In one case I saw this condition prevail for three weeks.

When they become fully conscious they

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remember nothing of the attacks, and are very tired. The muscles are painful and the patient usually wants to know what has happened.

The temperature is increased and the pulse is rapid, but as long as the temperature is not above 104 degrees F. and the pulse remains good, it is possible to save the patient. The prognosis for the child is not so good.

I will now cite two of my cases:

Case No. 1.—Saw the patient for the first time in the fall of 1904. She had eczema of face and ear. This returned in spring of 1905, with herpetiform eruptions on lower extremities. Had for years been troubled with varicosities of the limbs. During 1906 patient was in care of another physician, and during the fall she said she had an abortion (first pregnancy, married six years), all efforts at prevention of abortion failing. In the spring of 1907 she came again to my office for general pruritus, which was purely neurotic. Later she came for treatment for rhinitis. In March, 1907, she became pregnant again (second time), and on June 10 following came to see me, her varicosities being quite troublesome. Last period March 12; quickening July 17; due December 19, 1907. Urinalyses made monthly and results negative, even in October, but on evening of November 18 she complained of indigestion and sent for medicine; the next day I decided to call to see her, and did so. I told her I wanted a specimen of urine and I examined it late that evening and found the sp. gr. 1017 and considerable albumen. I intended to call next day and place the patient on prophylactic treatment, but at 7.30 o'clock the next morning (November 19) I received a call to come at once, that the patient was blind. During the night she developed headache, vomiting and cloudiness of vision. I immediately sent for a competent graduate nurse nearby, and the patient soon had every indicated attention. While the patient could not recognize objects all day, she could be made to swallow liquids, and consequently magnesium sulphate in solution was immediately and freely given by the mouth. She was also placed in a hot pack. Bowel enemas of soap and water were given. At 9.30 a. m. occurred the first good bowel movement. The temperature was 97.8 degrees F., pulse 88. Chloral per rectum was given every three hours. No perspiration until 1 p. m., but at this time there was increased headache, vomiting of bile at times and irrational talking; the kidneys were acting some—dark red urine. The pulse was weak all through the prodromal stage. At about 3.30 p. m. she had a convulsion; pulse 160 and temperature 101 degrees F. Ice cap to head. Other convulsions at 4 and 4.30 p. m. Fl. ext. veratrum viridi, m. x, was given hypodermically at 4.45 p. m. Pulse soon came down to 72, but at 5.30 p. m. she had another convulsion, but the pulse was only 88 and the temperature 101 degrees F. Then fl. ext. veratrum viridi again, m. v. By 5.45 p. m. the pulse was 72, temperature 101 degrees F., respiration 24. At this time I examined the patient and found the cervix obliterated and the os dilated to size of half dollar; she was restless, but there were no labor pains. Soon gave more magnesium sulphate by mouth, and after 6 p. m. frequent bowel movements resulted. All during the day I was able to give by mouth f3ij of Basham's mixture every two or three hours and obtained up until 6 p. m. ten fluid ounces of urine; also had free perspiration at this time. She now had periods of restful sleep. Up to midnight six ounces more of urine. At 11 p. m. she recognized my voice for the first time, but could not see me. The cervix was now closing and there were no evidences of labor. Since 8 p. m. a few ounces of milk were given every hour and a half. At midnight the temperature was 99.6 degrees F., pulse 72, respiration 24. The patient now continued to improve, and by 1 o'clock of the next afternoon she knew all that was going on and remembered everything before the attack, but her vision was not yet clear. I kept her on a milk diet, kept the bowels and kidneys active and the patient's body very warm, and she improved rapidly as to the eclamptic condition. At 7 p. m. on November 24 the patient fell in labor. At 3 a. m. on November 25 the membranes ruptured and the first boy (L. O. A.) was born normally at 4.15 a. m.; the second boy (R. S. P.) was born normally at 6.25 a. m.; one hour later removed the completely adherent placentæ (two distinct placentæ, united at base). The mother was very weak; the boys were well. The uterus was none too firm for about twenty-four hours, yet there was no undue bleeding. The mother remained very weak for about eight or nine days, but after this improved rapidly on iron and strychnine. On December 13 following the urine still contained albumen (sp. gr. 1030) in spite of a milk diet and the use of Basham's mixture. For the first

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time in my practice I then prescribed nephretin, gr. xv, t. i. d., and the patient at once began to improve, the albumen being greatly reduced in two days, practically gone in five days, none present in thirteen days or at any time afterwards. The mother and both boys are hearty and well at present, April, 1911.

Case No. 2—A primipara, aged 18 years, pregnant about eight months. I never saw patient until about two hours after the first convulsion. Dr. H. U. Bauer very kindly and properly attended patient until my arrival. On December 18, 1910, the patient felt well until noon, when she ate a full chicken dinner; did not feel so well all afternoon; did not eat at time of evening meal, and soon after 6 p. m. was found in her room in convulsions and in profound coma. She was in this condition when I arrived. She had been given chloroform inhalations for the convulsions, which occurred every fifteen minutes. Upon examination I found that the cervix was very soft and almost obliterated and the os admitted a finger and was very yielding. I decided to deliver at once, and readily effected a dilatation of the cervix and delivered by podalic version a live female infant, which is living and well to-day. I introduced three perineal sutures to unite the torn muscles, although the perineal skin was intact. The patient was at once placed in hot packs; had fl. ext. of veratrum viridi, m. xv, given hypodermically, and ol. tiglii, m. iv, in sweet oil, was poured down her throat; high bowel enemas of solution of magnesium sulphate were also injected. A soft mouth-gag had been placed in her mouth from the time she was found, and this was kept in place during the night. For over an hour after delivery the patient became worse; convulsions of over thirty seconds every fifteen minutes; pulse 134, full and bounding; respiration 30. Until midnight the patient had received forty minims of fl. ext. veratrum viridi, and from then until 2.30 o'clock the next afternoon sixty minims more, and by this time the pulse was down to 90, respiration 28. The hot packs had been continued and the patient was perspiring. Small quantities of urine were voided involuntarily from time to time and were lost. She frequently vomited a dark green fluid, and had no satisfactory bowel movement until 8.30 a. m., 10.30 a. m. and 2.30 p. m. During all this time the coma continued, as well as the restlessness and tossing of the head and body, especially of the left arm and leg. The pupils throughout were widely dilated. An ice cap had been placed to the head. At noon more high enemas of Epsom salts were ordered. After 2.30 p. m. she began to show decided signs of improvement; she had a few lucid moments, the bowels were more active, gas was freely expelled from the bowels, and she had intervals of natural sleep. By midnight of this day the temperature was 98 degrees F., pulse 90, respiration 26, and patient was resting some. Improvement now continued and the patient was again fully conscious, but remembered nothing of the attack; her muscles were "sore." The following afternoon, December 20, she had chills, a temperature of 104.2 degrees F., pulse 120; the lochia was offensive, and there was abdominal tenderness; not a very pleasant sequence, but one very apt to occur with the best of care in eclamptic patients. The patient was septic in spite of every precaution taken at the time of delivery, and she was rigorously treated for this septic condition. An ice bag on the head and one on the abdomen, quinine, gr. ij, and whisky, fl. ℥ss, every two hours; the bowels kept open; vaginal irrigations of normal saline solution (bichloride of mercury severely irritated the vaginal and vulvar mucous membrane). After forty-eight hours the patient's stomach rebelled against the medicine and she was placed on strychnine sulphate, gr. 1-30, t. i. d. The temperature varied between normal and 104 degrees F. until January 2, 1911, and on January 4, at 8 a. m., it was 97 degrees F.; 12 noon, 99.4 degrees F.; 4 p. m., 103.6 degrees F.; 8 p. m., 105 degrees F., and the pulse 120; midnight, 104 degrees F., and pulse 116. The next day the temperature came down to normal and the pulse to 80. From this time on the patient made a rapid recovery.

The prognosis of eclampsia is very uncertain, as an apparently mild case may eventually terminate fatally, while a most severe case may occasionally be saved. The maternal mortality varies from 20 to 30 per cent. The causes of death named by various writers are: Asphyxia, apoplexy, cerebral congestion, edema of the brain, larynx or lungs; exhaustion, collapse, heart failure, paralysis of the heart, thrombosis, embolism, especially of pulmonary arteries; insufflation of foreign substances, as food, blood, etc.; deglutition pneumonia, broncho pneumonia, overwhelming toxemia, intercurrent puerperal conditions, such as hemorrhage, sepsis, etc. Hirst mentions a case of gangrene of the lungs and also one of malig-

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nant purpura hemorrhagica. The fetal mortality is still about 50 per cent.

The causes of death in the child, recorded, are: Maternal convulsions and the resulting pressure, asphyxia from pressure, asphyxia from edema of the placenta, excess of carbon dioxide in the blood, possibly the maternal toxins; placental hemorrhages, which are liable in albumenurics; ending of pregnancy before child is viable, and the American Text-Book of Obs. records a case of encephalitis.

The treatment consists of (a) control of the convulsions, (b) relief and prevention of the cerebral congestion, (c) elimination and prevention of the toxins. While no one line of treatment is applicable in all instances, yet I have found the following effectual in all of my cases:

For the Control of the Convulsions.

Chloroform inhalations. This I consider of the greatest importance and value. Chloral and morphine have not been satisfactory in my hands. Theoretically, morphine is contraindicated on account of its effect on the secretions and elimination, and morphine may be allowable in parenchymatous, but not in interstitial, nephritis. Veratrum viridi, next to chloroform, is the best agent for the control and prevention of convulsions; in fact, it is the drug *par excellence* for all the conditions in eclampsia. When the pulse is strong, full and rapid, I begin with the fluidextract (the tincture has always failed me) of veratrum viridi by injecting hypodermically fifteen minims. According to the indications by the pulse, I inject five or ten minims every fifteen, thirty or sixty minutes, until the pulse is down to 70 or less, and then keep it there if there are no contraindications.

For the Relief and Prevention of the Cerebral Congestions.

Veratrum viridi bleeds the patient into her peripheral vessels, and therefore is indicated for this also. Ice bag to the head and the nape of the neck, diaphoresis, purgation, venesection in the plethoric.

For the Elimination and Prevention of Toxins.

Veratrum viridi is indicated for this purpose also, since it encourages diaphoresis. Sweating is of the greatest importance, and this I obtain by continuous hot packs. Purgation is also imperative. If the patient has intervals in which she can swallow, I give freely magnesium sulphate in solution by the mouth; if not, I give from two to four drops of croton oil in olive oil poured down the back of the tongue. Always give bowel enemas of solution of magnesium sulphate in addition to what has been given by the mouth.

In conclusion, let me offer this reminder, viz.: Always keep a soft mouth gag in place so long as the patient is liable to convulsions.

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Remarks on Appendicular Abscess.

By Axel V. Grafstrom, M.D.
Jamestown, N. Y.

In a paper on the "Treatment of Appendicitis," which appeared in The Medical Council, February, 1910, I wrote:

". . . Since 1893 I have had the opportunity of being present at upwards of two hundred operations for appendicitis performed by various surgeons, and to observe those cases either until full recovery set in or death supervened. It perhaps seems rash and bold for a physician thus to criticize surgical work, but I cannot help now strongly holding that such an operation should be completed in the shortest possible time. Less ether and chloroform, less hesitation and handling of the intestines, less sutures and more dexterity, and, in my opinion, there would be more satisfactory results."

Since that February contribution to The Council I have had the opportunity to read and study a clever article on "The Treatment of Abscess of the Appendicitis," by Louis Weiss, of Newark, N. J., in *Therapeutic Medicine*, September, 1910, from which I take pleasure to quote:

". . . If the appendix can be freed from its adhesions with ease the external incision should be enlarged and the organ removed. But if the appendix is strongly adherent no attempt should be made to tear it away, thus avoiding troublesome hemorrhage and keeping intact the protective wall of the abscess, and preventing new avenues of infection from being opened.

"The primary object in an abscess case of appendicitis is the evacuation of the pus and elimination of the sepsis. The removal of the appendix is of secondary consideration. If impossible of removal with safety to the patient, the appendix, or what is left of it, may remain *in situ*, without any fear of endangering the life of the patient."

During the past four years I have been present at four operations for abscess of the appendix, which were all performed successfully and where the patients made speedy recovery. In those four cases the incision was made quite small, the pus evacuated and the sloughing appendix not removed.

Following is a report of one of these cases, which may serve as a typical illustration:

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"At seven o'clock in the evening I made a call on a patient, a child four years old, who had been sick five days with an acute attack of catarrhal appendicitis. I found the rectal temperature to be 102° Fahr., and the pulse 120, as compared and contrasted vividly with a normal temperature and pulse at my morning call. A diagnosis of appendicular abscess was made, and the patient thereupon immediately transferred to the local hospital. Considering the case critical, I requested the surgeon to make speedy work. A small incision was made; the pus evacuated; the sloughing appendix came in view, but was not removed; the cavity was sponged with hydrogen peroxide, and a drainage tube inserted. The operation was performed in less than half an hour, and twelve days later the patient was well enough to be removed to her home."

Again, during the past five years I have witnessed another four operations for abscess of the appendix, where, in each case, a large incision was made, and after the pus had been evacuated the sloughing, adherent appendix and some of the omentum were removed. The operations were performed with great care and deliberation, the technique was up to date, and the patients were under anesthetics about one hour. In all four cases the patients died within a week after the operation.

While looking over literature on the subject I came across the following reports, which, in my opinion, are of some interest:

1. In 1848, Hancock ("Disease of the Appendix Caeci Cured by Operation") incised the abdomen in the right groin in a case of typhlitis, in which, perhaps, the inflammation had become diffuse; a quantity of very offensive, turbid serum escaped, a fecal calculus appeared on the sixteenth day, and the wound healed some ten days later.

2. In 1884, Griswold, of New York, operated on a male patient, aged 24 or thereabouts, suffering from typhlitis. The surgeon made a small incision, evacuated the pus and inserted a large drainage tube of rubber. No effort was made to remove the appendix. The patient recovered. This was probably the first operation for appendicular abscess performed in New York, and took place in the patient's apartment in the old University Building, at Washington Square.

The points of Dr. Weiss are exceedingly well taken.

To open an abscess of appendicitis is a different thing than to perform an operation for the removal of the appendix in either the catarrhal, obliterative or ulcerative varieties of the disease, when there is no pus.

In the first-mentioned operation we have localized pus surrounded by a layer of protective wall. To empty the pus-cavity so as not to disturb its protective wall and to cause any extension of infection, and to do it in such a way as not to produce too great a shock to the patient, that procedure, I hold, should be our aim. Nature is only too willing to do the rest. But by too much and unwise interference surely the death-rate will and must increase.

The Carriage of Disease by Human Beings.

By J. L. DE WOLFE, M.D.,
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In connection with the letter sent to THE COUNCIL recently concerning the cholera ishmael at Grosse Isle, a digest of an article by Dr. W. T. Cornell, Director of Pathological Laboratory, Queen's University, in the *Journal of the C. M. A.*, on "Carriers of Disease," with a few modest additions of my own, may prove of interest.

In my former letter I did not allude to the terrible legacy which these preventable, acute, infectious diseases of childhood leave behind them. The major proportion of chronic degeneration of blood vessels, nervous system and internal organs in after life are due to these. Delicacy, feebleness, defective sight, blindness, loss of hearing and speech, paralysis and cripplings, etc., in childhood, demand from the public the appointment of scientifically trained, expert men in every municipality to gain control and in time to banish that demon of death and damage—infectious disease of childhood.

I. Carriers in Typhoid.

Cummins, in a paper read before the British Medical Association, July, 1910, classified people who pass typhoid bacilli in their excreta as follows: (1) *Precarious Carriers.*—Persons in the incubation stage who are harboring germs, but have not yet developed the disease. (2) *Paradoxical Carriers.*—Persons who have contracted the typhoid bacilli without resultant illness and who continue to pass them in the excreta. (3) *Typhoid Cases.*—(a) Recognized, (b) unrecognized, (c) convalescent. (4) *Chronic Carriers.*—Persons who, subsequent to a recognized or unrecognized attack, or when after contact with cases, continue to pass typhoid bacilli either constantly or intermittently in their excreta.

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The justification of this classification is found in the investigations instituted by Germany six years ago, and more recently in other countries, especially in the French and English military sources. These investigations have proved that in the incubation period typhoid bacilli may be excreted in the feces; that many mild cases in children are overlooked, and many are unrecognized in adults because of the non-presentation of the usual clinical characteristic features of typhoid; that convalescents frequently leave the sick ward or room still excreting the bacilli; that a certain percentage either continuously or intermittently continue to excrete the typhoid bacilli for months or years, and that of those exposed to infection, but who do not take the disease, a small percentage also become chronic carriers. As to the percentage of those who still excrete the bacilli after being discharged from hospital or sick room, Park, of New York, says, 8 per cent, while the German average figures are 11 per cent. The general average of chronic carriers lies between 3 and 4 per cent. It is very difficult, in most cases impossible, to get rid of these bacteria. Ledingham says: "Once a carrier, always a carrier." When we consider the number of mild cases of typhoid presenting anomalous symptoms and course, which occur and are usually unrecognized as typhoid, we can understand how it keeps its grip on the human race despite our care of the sick and our guard of the water supplies and sewage disposal, etc. Three per cent. of these anomalous cases become permanent carriers. It is only by bacteriological examination that this mild, non-classical typhoid is often detected, save during an epidemic, where suspicion may be aroused by these unordinary cases. In an outbreak in a French regiment recorded by Vincent, only nineteen were sent into hospitals with clinical typhoid, but thirty-eight others with various symptoms of illness were proved by blood reactions, blood cultures and examination of stools to be really infected. It behooves us therefore to be on guard in our different localities, where undoubted typhoid attacks one or more families, and to be watchful of other febrile attacks of short duration, with or without tonsillitis, bronchitis, etc., and subject them to bacteriological tests.

Carriers are in reality more dangerous than the sick as sources of infection. They, to a very great extent, are unrecognized and are therefore under no sanitary restraint. They do not know of their condition and take no special care of their excreta, etc. If placed in a position where they are handling food, especially milk, they may become very dangerous. Female fecal carriers outnumber the males three to one. In fecal carriers, the bacilli develop almost entirely in the bile ducts and gall bladder, and their presence in the bile passages may be unaccompanied by the slightest clinical symptoms. The frequency with which typhoid bacilli are associated in relationship to gall stones must be noted. Ledingham points out that the proportion of female to male carriers is the same as female and male cases of gall stones. Fecal carriers outnumber urinary carriers two to one, and male urinary carriers are more frequent than female ones, the proportion being three to two.

Park, of New York, 1909, recorded two outbreaks due to milk in dairies. As summarized by him: "Last year we traced over four hundred cases of typhoid to infection of a milk supply by a typhoid carrier who had the disease forty-seven years ago. Just recently we traced fifty cases to a dairyman who had the disease seven years ago." McDeeny, bacteriologist to the Lord Government Board of Ireland, 1908-09, reported two outbreaks due to milk infection by carriers. The first was a girl carrier, employed in a dairy, the milk of which was sent to a girls' school, where thirty-five pupils were suddenly stricken. The second was similarly caused, with over 200 cases resulting. Another notorious case is the one recorded by Super, 1907. In this instance a cook, a fecal carrier, in the course of five years, had infected twenty-six individuals in the various families in which she had been employed. This woman was kept in quarantine until recently, and to rid her of the bacilli all kinds of treatment were tried, but without avail.

The carrier in this disease is undoubtedly a most important and very active cause of the continuance, and in the initiation of typhoid outbreaks in the community. It is an insidious enemy and one difficult and very frequently impossible to guard against. A carrier is an apparently healthy person. who, after convalescence from or contact with a disease, continues to harbor and excrete the microbe of the disease. Even with the extremest sanitary precautions and measures for the stamping out of diseases

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such as typhoid and diphtheria, we are still faced by a problem of disease-initiation which is seemingly unsurmountable.

The typhoid bacillus, the dysentery bacillus, the diphtheria bacillus, the cholera spirillum, the meningococcus, and in all probability the specific poison of anterior poliomyelitis are capable of being transmitted by carriers.

Diphtheria.

The harboring carrier of the diphtheria bacillus, persisting after all local signs have disappeared, and the contact carrier has been within our knowledge for some years.

Summarizing the figures of many investigators, Arkwright states: "Taking the figures as a whole, it appears that one-half of the diphtheria patients are free from diphtheria bacilli within two or three days of the disappearance of the membrane, and of the remainder probably 50 per cent. are free in another week or ten days. At the end of a month 16 to 19 per cent. retain the bacillus; after two months 5 to 7 per cent.; after six months .02 per cent. (2 per 10,000). The persistence of the bacillus in contacts is much the same as in convalescents."

From the above statements it is apparent that diphtheria patients should not be discharged either in hospital or private practice until bacteriological examinations, made of swabs from throat and nose, have shown that the diphtheria bacilli have disappeared. The person or persons in charge of the nursing of the isolated patient should also undergo the same process, as apparently well people may harbor bacilli for varying periods without ill effect, or even be insusceptible in their presence.

Epidemic Meningitis

is another form of disease which is carried both by convalescents and contacts, in whom it has been known that the meningococcus has remained and been demonstrable in some cases after six to eighteen months from contraction of the disease. Vincent, in an article in the *Archives de Medecin et Pharmacie Militaire,* points out the dangerous possibilities of such carriers, and states that it is quite an easy matter to free the carriers from organisms by systematic treatment. The meningococcus is constantly present in the nose of those with the disease, and it has often been proved to be present in the nose of contacts. Here we have the explanation of outbreaks, here and there, of epidemic meningitis which are otherwise unexplainable. It follows, therefore, that here again we face a highly important factor in the causation of outbreaks of epidemic meningitis by its dissemination through convalescents or contacts, and, again, it is our duty to see that both convalescents and contacts are free of the meningococcus before going out into the world of men, women and children, the last being peculiarly susceptible to the disease.

Dysentery Carriers

also occur, but it seems that both convalescents and contacts are soon free of the organism in the intestines (a few days only), unless in the former cases there remain unhealed ulcers, which may continue to excrete bacilli.

Cholera

may also be spread by convalescents and contact carriers and also by precocious carriers, those who are infected, but not yet ill. The latter may bridge over intervals of less than a week, the former two of several weeks.

It may be noted that the carrier who is now at Grosse Isle is a contact carrier, and still harbors the spirilla after months. This case is interesting and menacing and may lead us to reconsider the statement of authorities that the existence and carriage of these organisms is limited, and that they have much difficulty in maintaining life in their breeding ground, the intestinal mucosa.

The widespread part played by carriers of disease is undeniable. It is therefore our duty to keep watch and ward on convalescents and contacts. Typhoid and diphtheria are two pests which are always with us, and are the cause not only of loss of life, but of untold suffering and heart-break to the human race. From the words of the foregoing article the way is pointed out and our course is clear.

Medical men of this day have no excuse for sending out into the world of men carriers of diseases such as typhoid, diphtheria, and epidemic meningitis.

In the Province of Quebec the laboratory of the Board of Health supplies all physicians who make application with bacteriologic outfits—glass tubes (with swabs enclosed) in tin cases, special plates for blood, for Widal reaction, etc. On return of the outfits bacteriologic examination at the laboratory is made and the result mailed to the physician.

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Acute Dysentery.
From the Medical History of Napoleon's Campaign in Russia in the Year 1812.

EDITOR MEDICAL COUNCIL:

In the June number of THE MEDICAL COUNCIL I described the features of dysentery as they presented themselves under extraordinary circumstances in the grand army of Napoleon during the campaign in Russia in the year 1812. This description I had taken from a Latin dissertation of the surgeon of a Wuertembergian regiment, Ch. Io. von Scherer, who had served through the whole campaign and had submitted in the year 1820 this dissertation, "Historia Morborum, qui in Expeditione Contra Russiam Anno 1812 Facta Legiones Wuertembergicas Invaserunt, Presertim Eorum qui Frigore Octi Sunt," to the Medical Faculty, presided over by F. G. Gmelin, to obtain the degree of doctor of medicine. I am not aware that this inestimably interesting and valuable dissertation has ever been translated into English, except that part which I have published in THE MEDICAL COUNCIL, and I now present the whole, together with some other reports which I have collected treating on that fatal campaign.

The diseases which befell the soldiers in Russia extended over the whole army. Von Scherer, however, gives his own observations only, which he had made while serving in the Wuertembergian corps of fourteen to fifteen thousand men. The expedition into Russia in the year 1812 was divided into ten divisions, each of these numbering fifty to sixty thousand men, all healthy, robust, most of them hardened in war. The Wuertembergians were commanded by General Count von Scheeler and the French General Marchand; the highest commander was Marshal Ney.

As mentioned, I had in my paper on dysentery in the June number described the march of the army through Poland and Lithuania, and I now continue what von Scherer has said on dysentery:

The necropsy of those who had died from dysentery revealed derangement of the digestive organs; the stomach, the large intestine, mostly the rectum, were inflamed; the intima of stomach and duodenum, sometime the whole intestine, were atonic. In some cases there were small ulcers, with jagged margins, in the stomach, especially in its fundus, and in the rectum; in other cases dysentery had proceeded to such an extent that pretty large ulcers had developed extending from the stomach into the small and from there into the large intestine, into the rectum. These ulcers were of sizes varying from that of a lentil to the size of an inch in diameter. Where the disease had progressed the intima, the mucosa and submucosa, very seldom, however, the serosa, were perforated by ulcers; in many cases there were in the fundus of the stomach and along the intestinal tract gangrenous patches. The gastric juice smelled highly acid, frequently the liver was discolored and contained a bluish liquid, its lower part in most cases hardened and bluish; the gall bladder, as a rule, was empty or contained only a small amount of bile; the mesenteric glands were mostly inflamed, sometimes purulent; the mesenteric and visceral vessels appeared often as if studded with blood. Such patients had suffered sometimes from gastralgy, had had great craving for food, especially vegetables, but were during that time entirely free from fever. Often they had been marching along with knapsack and arms, but suddenly had sat down and expired; others, in such condition, and, as a rule, the strongest, had become melancholic and committed suicide. Remarkably sudden disaster followed the immoderate use of alcohol. Some Wuertembergian soldiers, who during the first days of July had been sent on requisition, had discovered large quantities of brandy in a nobleman's mansion, and had indulged in its immoderate use and died, like all dysentery patients who took too much alcohol.

The number of Wuertembergians afflicted with dysentery, while on the march from the Niemen to the Duena, amounted to three thousand, at least this many were left behind in the hospitals of Malaty, Wilna, Disna, Strizzowan and Witepsk. The number of deaths in the hospitals increased as the disease proceeded from day to day, and the number of those who died on the march was not small. The exact hospital statistics cannot be given except that of Strizzowan, which was the only one from which lists had been preserved; it was the hospital in which von Scherer did duty during six weeks. Out of 902 patients 301 died during the first three weeks; during the other three weeks when the patients had better care only 36 died.

In the hospitals established on the march, in haste, in poor villages, medicaments were either wanting entirely or could be had only in insufficient quantity. All medical plants which grew on the soil in that climate were utilized by the surgeons, as, for instance, in the hospital of Witepsk, huckleberries and the root of tormentilla. Establishing the hospital in Strizzowan von Scherer placed some of his patients in the castle, others in a barren and the rest in stables. Not without great difficulties and under dangers he procured provisions from the neighborhood. As medicaments he used, and sometimes with really good results, the following plants which were found in abundance in the vicinity: 1. Cochlearia armoracea; 2. Acorus calamus; 3. Allium sativum; 4. Raphanus sativus; 5. Menyanthes trifoliata; 6. Salvia officinalis.

In the course of the following three weeks General Count von Scheeler handed nim several thousand florins to be employed for the alleviation of the sufferings of the soldiers under his care, and von Scherer procured from great distances, namely, from the Polish cities Mohilen, Minsk and Wilna, suitable medicines and provisions. The proper diet which could now be secured together with best medicines had an excellent effect. This is seen with a glance at

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the statistics of the first three and the last three weeks. In some cases which had been on the way to recovery, insignificant causes would bring relapse. Potatoes grew in abundance in the vicinity of the hospital, and patients would clandestinely help themselves and eat them in too large quantities with fatal result. In some there remained a great weakness of the intestinal tract for a long time. Emaciation of the convalescents improved only very slowly. Remarkable was a certain mental depression or indolence which remained in many patients. Even in officers who von Scherer had known as energetic and good-humored men there was seen for a long time a morose condition and very noticeable dullness. Whatever they undertook was done slowly and imperfectly. Sometimes even with a kind of wickedness, they showed inclination to steal or do something forbidden. Sometimes it was difficult to induce them to take exercise. Von Scherer, in order to cheer up the convalescents, ordered daily walks under guard, and this was the more necessary, as edemata developed on the extremities in those who remained motionless on their couches.

How injurious immoderate use of alcoholic beverages proved to be was demonstrated in three cases of convalescents, who were somewhat weak yet. They had procured secretly from the cellar of the hospital some bottles of brandy, and with the idea of having a good time had drank all of it in one sitting. Very soon they had dangerous symptoms: abdominal pain, nausea and vomiting followed by lachrymation from the protruding and inflamed eyes. They fell down senseless, had liquid and highly offensive evacuations and died, in spite of all medical aid, in six hours. On the abdomen, the neck, the chest and especially on the feet of the corpses of these men that were gangrenous spots of different sizes, a plain proof that the acute inflammation, gangrene and putrefaction had been caused by excessive irritation of the extremely weak body. Circumstances forbade necropsy in these cases.

Among different publications on the medical history of Napoleon's campaign in 1812, which I happened to find, was a dissertation of Marin Bunoust, "Considerations générales sur la congelation pendant l' ivresse, observée en Russie en 1812." Paris, 1817 (published, therefore, three years before the publication of von Scherer's dissertation), in which the author wishes to show that the physiological effect of drunkenness on the organism is identical with that of extreme cold.

Von Scherer, after the hospital of Strizzowan had been evacuated, again joined his regiment. The French army pursued in forced marches the enemy on the road to Moscow over Ostrowon, Witepsk and Smolensk. Dysentery did not abate. In the hospitals of Smolensk, Wiasma and Gziat, Von Scherer found, besides the wounded from the battles of Krasnog, Smolensk and Borodino, a great number of dysentery patients; many died on the march. The whole presented a pitiful sight and the soldiers' contempt of life excited horror. In the battle of Borodino the soldiers, void of all human feeling, fought with wild joy like maniacs; they threw themselves on the enemy where he was most numerous; at the assault of a battery each one tried to be first; immovable, they exposed themselves to the fire of innumerable cannon, and over hills of corpses they stormed the batteries of the enemy. This certainly was not the manifestation of health and strength, of calculated bravery, but it was a manifestation of the highest degree of despair.

About one thousand Wuertembergians were wounded in the battle of Borodino, and on many of these surgical operations had to be performed. Strange to say, the greatest operations on enfeebled wounded were more successful, a great many more were saved, than was generally the case under more favorable circumstances. Thus observed Sugeon General von Kohlreuter: That in the Russian campaign amputation of an arm, for instance, gave much better chances, more recoveries, than in the Saxon and French campaigns, during which latter the soldiers were still robust, well nourished and well supplied with all, even in abundance.

After the battle of Borodino, on September 5th and 7th, the army marched to Moscow, and arrived there on September 11th, exhausted in the highest degree from hunger and misery. The number of Wuertembergians suffering from dysentery was very large. A hospital was organized for them in a sugar refinery outside of Moscow. Many died here and the greater number was left to its fate at the retreat of the army.

The quarters at Moscow until October 19th improved the condition of the army very little. Devoured by hunger, in want of all necessities, the army had arrived. The terrible fire of the immense city had reduced the hope for comfortable winter quarters very much. Although the eatables which had been saved from the fire were distributed among the soldiers and they had during the weeks of their sojourn wine, tea, coffee, meat and bread, all wholesome and plentiful, yet dysentery continued and had assumed in most patients a typhoid character. Besides real typhus had now made its appearance in the army and, spreading rapidly through infection, caused great destruction and brought the misery

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to a climax. The great number of sick, crowded together in unfit quarters; the stench of the innumerable unburied putrefying cadavers of men and animals in the streets of Moscow, among them the corpses of several thousand Russians who had been taken prisoners and then massacred, not to speak of the putrefying cadavers on battlefields and the roads on which the army had marched, all this had finally developed into a pest-like typhus.

After the retreat from Moscow had been decided upon many thousands of sick were sent ahead on wagons under strong guards. These wagons took the shortest road to Borodino, while the army took the road to Kaluga. Several thousand typhus patients were left in Moscow, who, according to later information, with exception of a few, all died. Many of those, although suffering from typhus, who had retained strength enough to be able to have themselves transported on the wagons, recovered on the way, to become later victims of frost.

Weakened in body and mind the army left Moscow on October 18th and 19th. The weather was clear, the nights were cold, when they proceeded in forced marches on the road to Kaluga. Near Maloijorolawez the enemy attempted to bar the way, and an obstinate engagement developed, during which the French cavalry suffered severely. It is true the Russian battle line was broken, and the way was open, but the French army had received its death-blow. The order which thus far had kept all together was shaken and disorder of all kinds commenced. The retreat now continued in the direction of Borodino, Gziat and Wiasma, the same road which had been followed on the march towards Moscow, a road which was all laid bare and deserted. The soldiers, in view of the helplessness which manifested itself, gave up all hope and looked with dismay into a terrible future. Everywhere surrounded by the enemy, who attacked vehemently, the soldiers were forced to remain in their ranks on the great road; whoever straggled was lost—either killed or made prisoner of war. On the immense tract of land extending from Moscow to Wilna, not a single inhabitant was to be seen in a march of several days, not a head of cattle, only cities and villages burnt and in ruins. The misery increased from day to day. What little provisions had been taken along from Moscow were lost, together with the wagons, on the flight after the engagement of Maloijorolawez, and this happened, as we have seen, before the army reached Borodino; the ration which the individual soldier had with him was consumed during the first days, and thus a complete want made itself felt. The horses, receiving no food, fell in great numbers from exhaustion and starvation, cannon and innumerable wagons for want of means to transport them had to be destroyed and left behind. From the last days of October until mid-December, at which time the army arrived at Wilna, horse meat was the only food of the soldiers; many could not even obtain this and died from starvation before the intense cold weather set in. The meat which the soldiers ate was either that of exhausted and sick horses, which had not been able to walk any further, or of such which had been lying dead on the road a good while. With the greatest greed the men threw themselves on the dead animal with inhuman rage; they fought without distinction of rank and with disregard of all military discipline—officers and privates alike—for the possession of the preferred parts of the dead animal—the brain, the heart and the liver. The weakest had to be contented with any part. Many devoured the meat raw, others pierced it with the bayonet, roasted it at the camp fire and ate it without any addition, often with great relish.

Such was the sad condition when the setting in of extreme cold weather brought the misery—the horrors to a climax. During the last days of October, when the army had hardly reached Borodino, there blew cold winds from the North. The first snow fall was on October 26th, and the snow made the march of the enfeebled army difficult in the extreme. From this day on the cold increased daily, and the camping over night was terrible; the extremities of those who had no chance to protect themselves with clothes nor to come near the camp fire became frozen. During the first days of November the thermometer had fallen to 12 Reaumur (+5 Fahrenheit). Among the pernicious effects of the cold temperature were noticed already derangements of mind. The first effect on the brain in strong and healthy, as well as others, was loss of memory. Von Scherer noticed that, with the beginning of the cold weather, many could not remember the names for the best known, the everyday things, not

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even the eagerly longed for eatables could they name or name correctly; many forgot their own names and did not recognize any more their nearest comrades and friends. Others had become completely feebleminded, their whole expression was that of stupidity. And those of stronger constitution, who had resisted the effects of cold on body and mind, became deeply horrified on observing, in addition to their own sufferings, how the mental faculties of the best men who had hitherto been of strong will power had now become reduced, and how these unfortunates sooner or later, yet gradually, with lucid intervals for a few moments, invariably became completely insane.

The intense cold enfeebled first of all the brain of those whose health had already suffered, especially those who had had dysentery, but soon, while the cold increased daily, its pernicious effect was noticed in all. The internal vessels, especially those of the brain and the lungs, became congested in many to such a degree that all vital activity was paralyzed. On necropsy these vessels of brain and lungs and the right heart were found to be bloated and stretched; in one case the different vessels of the brain were torn and quite an amount of blood was effused between the meninges and the brain, in most cases more or less serum had collected in the cavities. The corpses were white as snow, while the central organs in every case were hyperemic. In the beginning, while the cold was still tolerable, the effect of the humors from the surface of the body to the central organs had caused only slight derangement of the functions of these organs like dyspnea, mental weakness, in some more or less indifference, disregard of surroundings; in short, all those symptoms of what was called at that time "Russian simpleton." Now all actions of the afflicted manifested mental paralysis and the highest degree of apathy. This condition resembles that of extreme old age, when mind and body return to the state of childhood. The bodies of those suffering from intense cold were shriveled and wrinkled. Men formerly models of bodily and mental strength, hardened in war, staggered now along, leaning on a stick, wailing and lamenting childlike, begging for a piece of bread, and if something to eat was given to them they burst out in really childish joy, not seldom shedding tears. The faces of these unfortunates were deadly pale, the features strangely distorted. Lads resembled men of 80 years of age and presented a cretin-like appearance; the lips were bluish, the eyes dull, without luster and constantly lachrymal; the veins very small, hardly visible; the extremities cold; the pulse could not be felt, neither at the radius nor at the temple bone, somnolency was general. Often it happened that in the moment of their sinking down the lower extremities became paralyzed, shortly after that a few drops of blood from the nose indicated the moribund condition. Severed were all bonds of brotherly love, extinguished all human feeling towards those who, from exhaustion, had fallen on the road. Many men, among them his former best comrades and even relatives, would fall upon him to divest him of his clothing and other belongings, to leave him naked on the snow, inevitably to die. The impulse of self-preservation reigned over everything in them.

During the second half of November, and more so during the first days of December, especially on the 8th, 9th and 10th, when the army arrived at Wilna, the cold had reached the lowest degree, during the night from December 9th to December 10th the thermometer showed minus 32 R (—40 F.). The cold air caused severe pain in the eyes, resembling that of strong pressure. The eyes, weakened by the constant sight of snow, suffered greatly under these circumstances. Many were blinded to such an extent that they could not see one step forward, could recognize nothing and had to find their way like the blind in general by aid of a stick. Many of these fell on the march and became stiffened at once.

During this period von Scherer noticed that those who had been suffering very much from cold would die quickly when they had fallen on the frozen ice-covered ground; the shaking by the fall probably causing injury to the spinal cord, resulting in sudden general paralysis of the lower extremities, the bladder and the intestinal tract being affected to the extent of involuntary voiding of urine and feces.

Regimental Surgeon von Keller stated to von Scherer the following case: "I was lying near Wilna, it was during the first days of December, during one of the coldest nights, together with several German officers, on the road close to a camp fire, when a military servant approached us asking permission to bring his master, a French

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officer of the guards, to our fire. This permission was willingly granted and two soldiers of the guard brought a tall and strong man of about 30 years and placed him between themselves on the ground. When the Frenchman learned of the presence of a surgeon he narrated that something quite extraordinary had happened to him. Notwithstanding the general great misery he had thus far been cheerful and well, but half an hour ago his feet had stiffened and he had been unable to walk, and now he had no sensation any more from the toes up the legs. I gave him an examination. The feet were stiff completely, white like marble and ice cold. The officer was well dressed and, notwithstanding his pitiful condition, more cheerful than myself and my comrades. Soon he felt a strong desire to urinate, but was unable to do so. With great relish he ate a large piece of horse flesh which had been roasted at the fire, but complained soon of great illness. His cheerfulness changed suddenly to a sensation of great distress. Ischuria persisted for several hours and caused him great pain; later on during the night he voided involuntarily feces and a large amount of urine. He slept a great deal, breathing was free, but at dawn he fell into a helpless condition, and, when daylight appeared, before we had left the fire, the strong man who eight to ten hours before had been in good health, died."

Most excellent and ingenious men in the prime of manhood suffered all more or less from the cold; with the exception of a few they all had their senses, if not entirely deranged, at least weakened. The longest and sometimes complete resistance to the cold was offered by those who had always been of a cheerful disposition, especially those who had not become discouraged by the great privations and hardships, who ate horse flesh with relish and who in general had adapted themselves to circumstances.

One of the Wuertembergian officers, a man of considerable military knowledge and experience, was attacked, some days' distance from Wilna, with so much loss of sensation that he only vegetated, moving along in the column like a machine. He had no bodily sickness, no fever, fairly well in strength, had never or rarely been in want, but his whole sensational system was seriously affected by cold. Von Scherer saw him, after he arrived at an inn in Wilna, somewhat recovered by warmth and food, but acting childishly. While he ate the food placed before him he would make terrible grimaces, crying or laughing for minutes at a time. With constitution badly shaken, but gradually improving, he returned home, although it took a long time before he recovered completely. All traces of his sickness disappeared finally and as active as ever he attended his former post.

Another officer with whom von Scherer traveled a few days between Krasnoz and Osscha had until then not suffered any real want. He rode in a well-closed carriage with pretty strong horses, had two soldiers as servants, was well dressed and suffered, therefore, much less than others. Especially was he well protected against the cold, yet this had a severe effect on him. His mind became deranged, he did not recognize von Scherer, with whom he had been for years in intimate relations, nor could he call either of his servants by name; he would constantly run alongside the carriage, insisting that it belonged to the French Emperor and that he was entrusted to guard his majesty. Only when he had fallen asleep or by force was von Scherer able, with the aid of the two servants to place him in the carriage. His mental condition became worse every day; von Scherer had to leave him. This officer reached Wilna, where he was made prisoner and died soon in captivity. Many more cases resembling these two were observed by von Scherer, and other army surgeons reported instances of the like effect of cold.

Surgeon General von Schmetter had remained with the Crown Prince of Wuertemberg in Wilna while the army marched to Moscow. He reported many cases of unfortunates whom he had received in the hospital in Wilna, who had been reduced through cold and misery of all kinds to a pitiful state—men formerly of a vigorous constitution presented a puerile appearance and had become demented. A cavalryman of the Duke Louis regiment, who had been admitted during the month of February, in the year 1813, into the hospital of Wilna, suffering from quiet mania without being feverish, was constantly searching for something. Hands and feet had been frozen. He became ill with typhus and was more or less delirious during two weeks. After the severity of the sickness had abated he again recommenced the search anxiously for something, and after the

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fever had left him he explained that thirty thousand florins, which he had brought with him to the hospital, had been taken away. It was learned that this cavalryman had been sent, together with other comrades, with dispatches to Murat; that these men had defended Murat with great bravery when he was in danger in the battle of Borodino. Murat, in recognition of their bravery, which had saved him, had given them a wagon with gold, which they were to divide between themselves. The share of each of these cavalrymen amounted to over thirty thousand florins, and the gold was transported on four horses, but these horses, for want of food, had broken down under the load and the gold had fallen into the hands of Cossacks. The patient became quite ecstatic when, during his convalescence, he was told that he had brought no gold with him into the hospital; only gradually could he be made to understand that he had been mistaken. He said, however, that he could not recollect having been robbed during the retreat, although this fact had been testified to by two witnesses. Two years after he had left the hospital and quitted the military service, when he was perfectly well and vigorous again he recollected that on a very cold day he had been taken prisoner by Cossacks, who had left him naked and unconscious in the snow. He could not remember how and when he had come into the hospital. Notwithstanding all these later recollections he still imagined from time to time that he had brought the gold with him into the hospital.

Surgeon General von Schmetter reported further the case of a cavalryman of the King's regiment who had returned like many others from Russia in an imbecile condition. He spoke alternately, or mixed up, Polish, Russian and German; had to be fed like a child, could not remember his name or the name of his native place, and died from exhaustion eight days after admittance into the hospital. On necropsy of the quite wrinkled body the cerebral vessels were found full of blood, the ventricles full of serum. On the surface of the brain between the latter and the meninges were found several larger and smaller sacs filled with lymph, the spinal canal full of serum; in the spinal cord plain traces of inflammation. In the lungs there was much dark coagulated blood, and likewise in the vena cava; in the stomach and intestines many cicatrices, mesenteric glands and pancreas were much degenerated and filled with pus; in the rectum many cicatrices and several ulcers. In the hospital of Mergentheim eight necropsies were held on corpses of soldiers who had returned mentally affected in consequence of exposure to extreme cold. In all these cases similar conditions had presented themselves.

Surgeon General von Kohlreuter attended an infantry officer who had arrived at Inorawlow, in Poland, where the remainder of the Wuertembergian corps had rallied. He showed no special sickness, had no fever, but fell into complete apathy. For a long time he had great weakness of mind, but recovered completely in the end. On another patient of this kind, an officer of the general staff, who had been treated after that fatal retreat from Moscow, von Kohlreuter reports that he later on recovered completely from the mental derangement, but died on his return, near the borders of Saxony, from exhaustion. An infantry officer became mentally deranged later on in his home; it took a long time. but he recovered finally without special medical aid.

Recovery of such cases was accomplished by time, mild climate, social intercourse, good nourishment; many of them on the way through Germany before they reached their own home had already completely gained their mental faculties, and only in a small number of cases did it take a long period of time and medication before recovery was assured.

The effect of intense cold on wounds was very severe: Violent inflammation, enormous swelling, gangrene—the latter often due to impossibility of proper care. Larger wounds sometimes could not be dressed on the retreat, and while the cold weather lasted gangrene and death followed in quick succession. The effect of cold was noticed also on wounds which had healed and cicatrized.

Von Happrecht, officer of the Duke Louis regiment, had been wounded in the foot by a cannon ball in the battle of Borodino on September 7th, and Surgeon-General von Kohlreuter had amputated it. Fairly strong and cheerful, this officer arrived safely at the Berezina. The passage over this river was, as is well known, very dangerous, and von Happrecht had to wait, exposed to cold, for some time before he could cross. Soon after traversing on horseback he felt

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as if he had lost the stump; he had no sensation in the leg, the foot of which had been amputated. Unfortunately he approached a fire to warm himself and felt severe pain in the stump, extensive inflammation, with swelling, set in; gangrene followed and, notwithstanding all skillful attendance, he died soon after his arrival at Wilna.

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Preventive Medicine as a Specialty.

To The Medical Council:

In The Medical Council for May, page 187, Dr. D. E. Ford asks for an article upon preventive medicine as a specialty. I agree with Dr. Ford that there is no topic in the field of medicine more worthy of discussion. We have been assured by essayists for many years that preventive medicine was "coming," was "the medicine of the future," but just as men said the same things of alkaloidal medicine, most of us sat down to wait for it instead of jumping into help the good work along ourselves.

In both cases others took hold, and the greatest triumphs of America during the past quarter century have been won by American doctors in the field of preventive medicine.

In a recent address in Philadelphia, President Taft called attention to some of these, and gave honor where it was due. The discoveries of the mosquito transmission of yellow fever and malaria; the rat, squirrel and flea propagation of bubonic plague; the ticks carrying spotted fever, have each made it possible to eradicate the corresponding malady. Vaccination has almost completely extinguished smallpox in our colonial domain. The detection of the hookworm as the cause of the debility peculiar to Porto Rico, has reduced the prevalence of this affection so markedly that we are promised its finish with the next campaign. Especially notable are the improvements in the incidence of tuberculosis, venereal disease, diphtheria, etc., when hygienic precautions have been taken. One of the most striking instances of this good work is offered by the recent history of typhoid fever. The transmission by flies has been recognized, and by rigidly excluding these from the feces and the food, great good is accomplished. The ravages of that fever in the Spanish-American war have not been forgotten. During the past two months we have had about 20,000 troops in the South, exposed to rain, with mud and dirt beyond description, and not a solitary case of typhoid has developed. This is attributed to the protective vaccinations. This may surprise some who have not realized the progress made along this line.

These are examples of the more showy forms of preventive medicine, the sorts that get in the papers—municipal and military hygiene. It is very attractive; the results are so apparent that they can not be gainsaid, and the sense of power, the consciousness of good work well done, is most gratifying.

During my residence in Philadelphia, a case of yellow fever was imported. I was placed in charge of the imperiled section, the Delaware River front, and put it in order—abating more than two thousand nuisances while at it. There was no outbreak of the apprehended pest, and the health of the section was much better for the following year. The Italian quarter was placed in my hands, and I have not forgotten the appreciation shown by those kindly people for my efforts in their behalf and the zeal and intelligence they showed in aiding this good work. One bit of my work I now recall. In the Sixteenth Ward an old watercourse, known as the Cohocksink Creek, meandered through the ward, an open sewer which was employed by a few firms as a canal. Numerous efforts had been made to suppress it, but some interests had always defeated them. I took a census of the houses along the creek and compared it with the whole of that ward. The mortality along the creek was so much greater that the objections to suppressing the canal were withdrawn.

During my service with the Health Office. I am sure I learned to appreciate the importance of hygiene as never before. Hygiene is a thing everybody believes in, but nobody practices. There is this peril in the position of public sanitarian, that one gets to realize the importance of sanitation and its neglect by many of the medical profession, until he gets to feel a contempt for the latter.

One may feel, or think, but he does not have to express himself publicly.

Here is where our much-maligned code of ethics comes in appositely. A case of

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diphtheria is reported and a city sanitarian is ordered to visit the house and inspect. Since the code forbids any physician visiting a patient under the care of another, and public service does not relieve a man from his ethical obligations, the proper course is for him to notify the attending physician of the hour of his visit and make a consultation of it. The sanitarian and attendant together can do more good than either alone. But if the official makes his call in the attending doctor's absence; if the latter is displaced and the city doctor takes over the case, what are we to think? The inevitable result is that the medical profession is soon arrayed in opposition to the sanitary administration and the work of the latter is crippled.

Municipal and military hygiene offers an opening for a limited number of specialists. It brings the doctor into politics or the army; it doesn't pay very well, leads to nothing in most instances, and plays the mischief with one's practice, as does anything that takes the doctor away from that individual attention patients require.

WILLIAM F. WAUGH, M.D.

1358-62 Fulton street, Chicago.

Should Venereal Diseases Be Reported?

EDITOR MEDICAL COUNCIL:

Although my early years date not so far back as our colleague, Dr. Benj. Edson, and I am not at all old-fashioned in my ideas as he claims to be, still I agree with every word the doctor says in his letter to THE MEDICAL COUNCIL of July, 1911, concerning the reporting of venereal diseases. If you allow me I would also like to give you my opinion in this matter.

In a letter of last December, Dr. Charles W. Eliot, Harvard's former president, asked me three questions: (1) Can venereal diseases be registered? (2) Ought public hospitals for venereal diseases be established? (3) Can brothels be suppressed?

My answer was as follows:

(1) You may decree that venereal diseases shall be registered, but when it becomes known to the public at large that every reputable physician is bound to notify these diseases to the authorities the reputable physicians will have no patients with such diseases to notify about. No one is ashamed to own that he once had measles or scarlet fever, or even cholera, but only the cynic will wish it to be known that he ever was infected with gonorrhea or syphilis. Rightly or wrongly, a moral stigma rests upon such a patient. For that reason no patient will ever go to a physician who he even suspects will notify his case. Thus the entire notification will become illusory.

(2) For the same reason as before, if a hospital should become known as one for venereal diseases only, no patient will come near the same. By being there every one of his friends will at once know the nature of his disease. There ought to be wards for venereal diseases in every public hospital.

(3) Brothels have been suppressed in Berlin and all over Prussia for over twenty years at least, still this did not abolish or even diminish prostitution; on the contrary, it spread the same to districts which were free of it before.

To this answer I added that, in my opinion, the only salvation lies in early education of our children in matters of sex, not by a few lectures at the time of puberty, when the damage, as a rule, has been done in the form of masturbation, but by a systematic instruction, beginning in infancy. To this letter I received the following answer:

"I thank you also for your answers to the three questions I asked in my letter to you of December 27th. I find that most physicians hold the opinion you express, and believe that venereal diseases must continue to be dealt with in a different manner from all other contagious diseases, and that the remedies for prostitution are to be found only in the slow process of education and sanitation."

To this I wish to add that I do not consider the process of education so very slow. In one generation a great change could take place, and what is one generation in the history of mankind? Besides, no other process would abolish prostitution in less than a generation.

Anyhow, our friend, Dr. Edson, may console himself; he is not the only old-fashioned one. Harvard's president, who ought to know a good many physicians, says that most physicians hold the same opinion as he has. Besides, the logic is on our side.

B. S. TALMEY, M.D.

12 W. 123d Street, New York City.

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Sleeping on a Full Stomach.

To The Medical Council:

Fallacy and error, if entrenched by precedent, appear by some strange quirk of the human mind to be more firmly fixed than fact, no matter how scientific the fact.

This is particularly true of the practice of medicine, while the converse, the blind, mob-like rush to some new fad is necessary to preserve the compensating balance. The balance seems to take care of itself.

When hydrogen peroxide was first brought into general use it was hailed as a universal panacea, and the paroxysm over Ehrlich's 606 has not settled into the realms of sanity by quite a bit even yet.

"Go to bed with an empty stomach." Does not the quotation have a familiar ring?

Now let us reason a bit, empirically, first, as almost all that we know of medicine had to be threshed out experimentally, and the scientist then came along and told us the rationale of it all.

When one goes out to capture a bird, or a beast of prey, a condor or a lion, he seeks to come upon it when gorged with food and so sleeping to the depths of profundity.

When you drive a horse and stable him, forgetting his supper, he will not sleep until his hunger is appeased, and if the stall have a board floor, and be near your sleeping apartment, he will insure you company in his wakefulness until you satiate him.

Condors and lions and horses are brutes (so are some people), but when one of the babies of our family wakened in the night it refused to sleep, or to allow us to sleep, until it had its little stomach filled, and the baby is nearer nature than the man or the woman, who has acquired habit. We will find habit to be but "second nature."

No matter how heartily you may cling to the axiom of empty stomachs as a needful preparation for slumber, you will find it difficult to keep awake after a hearty dinner, despite your habit.

Now for the scientific aspect of the question. There is a more or less constant amount of blood within the circulatory system. In time of mental application, the brain becomes temporarily congested with blood, the energy of which goes into the energy of thought; when the stomach is filled with food, and the digestive function begins, the fluid is determined to the digestive organs, that the various fluids be secreted.

Sleep is simply defined as absolute brain rest. If the blood can be determined to the digestive function, and the brain be left relatively empty, anemic, then will come sleep, even as slumber seizes us after the noonday meal. Many persons seem to require long hours for sleep, but how many of this number have perfect mental rest during all that period?

I have ever been an iconoclast; I have believed that which I could see and demonstrate, and I have no more reverence for a statement made under the color of authority than for the babblings of a child, unless the reason be made plain, and when I use the word reason, I mean that I must be absolutely convinced. Consequently, I began, years ago, the habit of eating my heaviest meal of the day and following with a bath just before retiring; I want the excretory and digestive functions to call all the blood possible from my brain, that I may have the absolute slumber that really gives brain rest.

For forty-two years I have averaged fewer than four hours of sleep each day, and now I can perform a heavy day of manual labor, followed by an equally heavy day of mental work, and then after the few hours' slumber I rise fully refreshed. But my sleep is that of the dead; there is no change of posture and no knowing of the watches of the night.

I will admit that my views are rank heresy, but all reformers, all prophets, all propagandists, in a word, all who have dared to stray from the beaten paths of precedent and conventionality, have been dubbed heretics, and to me the title is one of honor because of the goodly company.

G. Henri Bogart, M.D.
304 S. 15th street.

If our readers desire explanation of any obscure points in any article in The Council, they should address the author direct, enclosing stamp for reply. What is obscure to you may be so to many others. The author may reply direct, or he may address all at once through a further article in The Council.

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Practicability in Medicine.

To THE MEDICAL COUNCIL:

The communication in the July issue of THE COUNCIL, concerning the adenoid proposition, by Dr. Charles V. Cross, of San Francisco, seems to me to be the most sensible article on the subject that I have crossed in all of my reading.

The method he pursues in dealing with adenoids is practical and has common sense to commend it; it is simple and effective, and any general practician should be able to employ it and get the fees, instead of sending his cases off to a specialist that he may get the glory and pocket fees which he himself might just as well have.

This is a day in which nose and throat specialists are making a fad of digging out tonsils and scraping away adenoids, and, as Dr. Cross says, doing the "surgical circus" act and getting fancy prices for their performances, oftentimes doing more harm than they render benefit.

Several years ago I heard a celebrated and successful Chicago specialist say he would rather have his finger as a curette for removing adenoid growths than any instrument for the purpose that had ever been invented.

The question is asked in the last COUNCIL: "In what diseases or surgical conditions does the general family physician need practical instruction?" I would answer that, from my own experience and observation, he needs practical, common sense instructions as to the best methods of dealing with obstetrical and gynecological cases. As to the former, he is too much given to haphazard, uncleanly practices; and as to the latter, he is prone to be negligent and timid, to ask a few questions, to prescribe a little medicine, with ninety-nine chances to one that he will shoot very wide of the mark, when he should make a thorough examination and investigation of every case that comes to his hands and make an earnest effort to remedy, by mechanical means or medication, whatever departures there may be from the normal. If he would do this it would be very seldom a case would get away from him and fall into the hands of "the other fellow."

W. R. BURR, M.D.

Auburn, Ky.

Side Lights in the Optical World.

To THE MEDICAL COUNCIL:

Referring to an article bearing the above caption which appeared in a recent issue of THE MEDICAL COUNCIL: Why attack the optometrist at so late a day? Why attack him at all? Whether the educated optometrist is, or is not, a semi- or a pseudo-professional man has no particular bearing on the case. His work as a successful practician stamps him as highly scientific, at least from an optical standpoint.

Oculists, to some extent, have been sleeping on their rights as far as advanced optometry is concerned. The present hue and cry might have been, to a great extent, obviated had the oculists devoted more time and study to mathematics and higher physics as applied to the refraction of the eye, while in their school years.

Simply because the optometrist does not use either mydriatics nor cycloplegics in his practice is not a good reason why he should be looked upon as "the natural enemy of the medical man."

As to confusion on the part of the people regarding the meaning and proper differentiation of titles such as eye-doctor, optician, oculist, and optometrist, and as to the optician or optometrist "telling the people different," the writer has frequently had patients referred to him by both, especially cases of diseased eyes. What the public desires and demands is proper service for time and money expended. No well-trained oculist need fear the advent of the optometrist, in fact the latter has been among us these many years under a different name, that of optician.

The word optometrist is of comparatively new coinage as applied to-day, but even at that it seems to inspire respect and, in some quarters, a certain degree of awe.

Dr. Anderson's letter, written ten years ago, could now be made to include the definition of the word optometry as it appears in Webster's New International Dictionary, 1910 edition; the word was not generally used in its present sense at the time the doctor's letter was written.

From present indications it begins to appear as if the medical practician who desires to practice ocular refraction will, in the future, have to build his foundation for the successful pursuit of this line of work on a basis composed of knowledge includ-

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ing algebra, geometry, trigonometry, and physics.

Perhaps he will find it less difficult, and certainly more becoming to the dignity of his calling, to build up to the optometrist, as it were, than to attempt by any means to bring the latter down to his present general standard as a scientific refractionist. The medical refractionist is, in a majority of instances, inclined to take himself and his routine practices too seriously; that is, if a thing is not done his way it must be done wrong. Now, this is not the right way in which to treat modern progress, for there is no good reason why there should not be progress shown in ocular refraction as well as in the other branches of ophthalmic practice.

The time when this optometrical bugaboo first loomed up on the medical horizon was the time to prepare, by study and investigation, the merits of optometry for meeting legitimate competition without fear. Such a method would have been much more reasonable and would have brought better results than the present cry for assistance given out to the general medical man.

The reminder that nearly 50 per cent. of the people are antagonistic to the medical profession is absurd. The medical profession of to-day stands out pre-eminent as a great world's benefactor; at no time since its incipiency has it taken a stride backward, and as God in His infinite wisdom sees fit to slowly unfold to the mind of the scientific medical man the marvels of prevention and cure of disease, the profession goes onward and upward onto a higher and more exalted plane. Furthermore, the intelligent people of the entire civilized world know this to be true, and it is a fact that is undoubtedly appreciated by far more than 50 per cent. of the citizens of our great and glorious country.

No medical man, be he a specialist or one of the grand army of general practicians, need wait long to come into "his own." If he is a good man and a student who sincerely believes in his profession as a man should, he can go out into the world and *get* "his own."

Much of the effort expended to build up protection around the medical profession is unnecessary and without sufficient reason.

The physician well grounded in his work has no one to fear.

This is the year 1911, and it is the duty of every medical man to so fortify himself with the requisite knowledge pertaining to his profession that he be immune from worry about optometry or any other calling infringing on his so-called rights.

The practice of optometry, whether recognized as either a semi-, quasi-, or a pseudo-profession exists to-day, and bids fair to grow into one of the most scientifically exact practices of modern times, based, as it is, upon the application of the proved laws of mathematics to light-waves, and the latter's action in the refracting media of the human eye.

CLAUDE WOLCOTT, M.D.
Box 101, Higgins, Texas.

Minor Surgery.

To THE MEDICAL COUNCIL:

In your May COUNCIL, Dr. Reat gave some details of the country doctor's work in emergency surgery. He concludes that railroad and shop dirt is clean dirt and field dirt is dirty dirt. His argument is short-sighted and fallacious. Iron dust and cinders carry dangers of their own, while few of the "bugs" escape the purifying processes going on in the soil. If he were right, why does he go to so much trouble to remove the shop dirt, even using benzine to clear it away? Instead of that he ought to scoop up a few handfuls of shop sweepings, dust and cinders, and use that for a dressing on wounds. Any farmer could tell him the result of applying a dressing of damp, clean earth. Or if Dr. Reat wants personal experience, just tell him to let a bee sting him twice, to one applying a wet poultice of good black Illinois real estate and to the other his machine dirt.

His mistake lies in assigning the result to the wrong cause, for he is right in finding greater resistance to ills in the city or shop worker. During the Civil War it was found that the big, lumpy farmer boys died like flies of the camp diseases, while the less muscular city recruits bore up better. When Pickett charged up the hill at Gettysburg it was a brigade of city men, counter-jumpers from peaceful, somnolent Philadelphia against which his charge broke and not the huge lumbermen of Maine.

Dr. Reat has bugs on his eyelashes and sees them everywhere he looks.

HENRY LOWRY, M.D.
4445 Racine avenue, Chicago.

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The Psychic Treatment of Morbid Anxiety.*

THE EDITOR, MEDICAL COUNCIL:

So much vague nonsense about the psychic factor in disease has been bruited about that there was much need of a serious effort to ascertain and clearly formulate the role of the psychic in the causation, prevention and cure of disease. To that end, the *Journal of Abnormal Psychology* was founded by Dr. Morton Prince in Boston some seven years ago; and the men who have been brought together by means of this journal met in Washington, May, 1910, during the Congress of Physicians and Surgeons and founded the American Psychopathological Association with the object of meeting together annually and discussing some of their many problems. On that occasion the role, "Mechanism of Dreams in Disease" was discussed.

"Morbid Anxiety" was the subject chosen for special discussion at this year's meeting.

Doctor Prince's presidential address discussed the mechanism of certain association neuroses in relation to this. He believed that unconscious cerebral processes could lead to formulation of ideas later recallable in memory. Neuro-mechanically speaking, instinctive and rational processes show no essential difference. He quoted his case of "rose catarrh" produced by an artificial flower. It was evident here that a stimulus in the nature of a suggestion produced the same effect as would have done the odor of a real flower through a mechanism similar to that of the psychosalivary reflex ascertained by Pawlow's experiment with dogs. Again, the stimulus which has determined an attack of anxiety may be itself quite unnoticed by the patient. Besides, the somatic reactions may occur without express ideation. The real problem is to know why fear arises in some people under certain conditions. The frequency, of course, varies with the condition; for example, the attacks of fear of high places would be less frequent than those of obsession towards suicide, which require a less definite circumstance to determine. It is by the study of the psychological mechanism that we shall learn to control the psychopathies, but it must be remembered that the threshold of excitability varies much with the individual, so that a most trivial incident may light up a whole train of painful memories leading to an anxiety state. This becomes an emotional trend more and more easy to excite.

For Prince, the hysterical is to be distinguished from the psychasthenic type of reaction, which is due (1) to a *physical* alteration of the excitability of the neurones; (2) *psychogenically,* to disorder of adjustment, because of the subconscious effect of cryptogrammic nerve currents due to secondary symbolisms of a psychic trauma, translated into a fear.

Dr. Ernest Jones, of Toronto, espoused *in toto* the hypothesis of Freud as to the genesis of morbid anxiety. It is well known that the latter refers its origin to a physiological state induced by the failure of sexual excitation to follow the natural course of physical gratification or conscious desire for such. The references which supported this theory were supplemented by a case of anxiety in a woman occurring eight months after her husband's death. There was a long history of onanism, and enuresis, which had caused a great deal of shame, especially when conjoined with infantile phantasies regarding procreation. The suppression of these lead to fastidious phobias against dirt or untidyness as well as to much self-recrimination regarding sexual sin. The presence of these phobias, in the view of the writer of this notice and of Dr. Prince, invalidated the claim of this case to support Freud's explanation of the origin of anxiety. As the writer pointed out in his discussion, Janet long ago showed the intimate relation between phobia and morbid anxiety, and that these were each only part of the larger syndrome, psychasthenia, in which the general motor agitations and tics were also a part, along with the intellectual manifestations known as obsessions and monomanias. The genesis of this condition was not that postulated by Freud. Its mechanism might in some cases be physiological, but when carefully examined, most cases appeared to be psychogenic. Thus in a girl aged 8, various monomanias, of which smacking the lips and bending down to touch the floor were the most conspicuous, were found by the writer to be the expression of a compensatory kiss and a healing touch, for the purpose of expiating the sin of injuring others, which the child believed her breath and feet did. An apparent cure by former treatment, consisting of large doses of

*Discussion at the second annual meeting of the American Psychopathological Association, May, 1911. (The full papers will be published in *Jour. Abnorm. Psychology* in July.)

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arsenic and confinement in a sanatorium, was explained by the child as a determination to stop the movements so that she might return home. The cause of the condition was an over-scrupulous insistence by the child's parents upon ethical ideas beyond the child's comprehension. Another similar case was also quoted.

It is such morbid ideas which become the substratum of future anxiety attacks. These must accordingly be treated through the ideas from which they arise. But it is very important to distinguish from this mechanism the purely somatic one concerned in cases of toxicosis, such as occurs from the poor oxidation of cardiac disease, during renal disease and on account of narcotics and other poisons ingested.

Doctor Sidis was not present, but contributed a paper whose main thesis was that all functional psychoses are an obsession by the fear instinct, which is very often subconscious. This instinct is much more powerful than the sexual one, and even greater than that of hunger. Superstition plays a large part in fostering a fearfulness which may reach morbidity. The remedy is, of course, obvious.

The third contribution to the symposium was that of Doctor Donley. In this he criticized Freud's setting aside from the consideration of the origin of morbid anxiety "all cases of doubtful or different etiology than the sexual," which is reduced by Donley to the formula: "There are clinical cases of anxiety neurosis in which no etiology can be easily ascertained; others where it is doubtful; others where it is different from the sexual." However, setting aside all cases of anxiety neurosis not having a sexual etiology, all those having a sexual etiology are sexual in origin. This logical defect is complemented by an ontological deficiency in Freud's conception; for it cannot be extended to include all cases in which anxious expectation is found; nor can it be confined to any particular group of anxieties without excluding therefrom too many cases to make it of any clinical use.

TOM A. WILLIAMS, M.D.
Washington, D. C.

Doctor, in sending in your subscriptions tell us what department of The Council you like best, what you would as lief see dropped and what new feature you would like to see added.

Treatment of Acute Dysentery.

EDITOR MEDICAL COUNCIL:

In the June issue of THE COUNCIL, Doctor Rose commented materially upon my article, "Treatment of Acute Dysentery," in a number of ways.

I am indeed sorry that the venerable doctor believes his CO_2 treatment in dysentery and diarrheal cases may receive the same fate as "Bier's Hyperemic Treatment."

It is an invariable rule with me never to extol that which I have had no experience with, and I should say that it would be a breach of trust on my part were I to take advantage of the hour and recommend such remedies or measures.

Every practitioner has his particular and pet methods of treatment, each achieving more or less success, and because of the success of a given treatment at the hands of one, is it to be inferred that, because of such success and heralding, all other practitioners are to be coerced into administering or applying such remedies or measures irrespective of their opinions or experiences?

A number of articles upon the use of CO_2 in the treatment of these cases have been published by different observers, and may I ask why the treatment has been abandoned? I have interviewed a number of actively engaged gastrologists and I have been informed that they do not use this method of treatment in their cases. Many have never used the gas, as they have never seen any benefit derived from its use in other hands.

I have had no personal experience with this remedy. I know that Dr. Rose is one of our most ardent and painstaking of workers, and nothing would give me more pleasure than to assist him in his work. As his enthusiasm for the remedy in the treatment of dysentery and diarrheal cases has been worked up to such a pitch I will interest myself and my co-workers in the use of this method of treatment and I will be glad to report, in opportune time, my experiences therefrom.

Dr. Rose further comments on the paper in being short of giving more of the etiology. No better argument need be advanced against the doctor's remarks than his own words, "It is true the paper treats only on therapy." He seems to believe that it would be much better and wiser to

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add materially to the paper, as to include the history (as far back as the ages), the etiology, symptomatology and most all other matters pertaining to the subject written upon rather than to stick closely to the title of his paper. Therein lies the "Waterloo" of many a valuable contribution. How much better it would be and how much oftener would short papers be read were they to treat concisely upon the subject presented, adhering closely to the title, *i. e.*, symptoms and diagnosis, etiology and pathology, treatment and prognosis, etc., keeping well within these divisions. Four or five well-written short papers are more apt to be read, when confined to their field, by the busy practitioners (who make up the great majority of the medical profession and to whom we write) than one or two lengthy articles which traverse the entire field.

The majority of medical men brush aside an article when they find it to be of great length or when the author deviates from his text. Where the treatment is dependent upon the etiology, the latter may be mentioned and then only casually, *i. e.*, coma due to uremia, cerebral apoplexy or to syphilitic gumma of the brain. Where etiology is the subject of discussion in a paper it would be improper to include the treatment.

The same arguments hold well in the discussions occurring in medical societies. It seems to be a general weakness among the medical fraternity, even to the best informed. They delve into material foreign to the subject which is placed before them, to the chagrin of their listeners, and it has often been remarked that a number of men discuss everything else but the subject under discussion. Many good and instructive papers and discussions are in vain for these reasons.

SAMUEL FLOERSHEIM, M.D.
808 Lexington avenue, New York.

Gallstone Colic and Its Treatment.

TO THE MEDICAL COUNCIL:

In the June number of your esteemed journal I addressed Dr. Samuel Floersheim in regard to an article of his on the treatment of dysentery. Will you kindly permit me to say a word on his paper under the above heading in the July issue? I wish to call his attention to my communication in the April number of THE MEDICAL COUNCIL of 1907, "Etiology and Treatment of Gallstones," from which he can learn something different from the old woman's therapy which he has presented and which is known already to everybody. I wish to ask him, also, what his remark "Acute indigestion is a misnomer for a multitude of *bona fide* clinical entities" really means, for I am under the impression that "acute indigestion" is indeed a good name for a multitude of clinical symptoms, and clinical symptoms are neither *bona* nor *mala fide*.

A. ROSE.
173 Lexington avenue, New York.

Serums.

TO THE MEDICAL COUNCIL:

Most emphatically do I protest against the popular fad of serum therapy, when we have remedies so much better, safer and more prompt in their action. The granule of Hyoscyamine 1-250 gr. will control the tetanus spasm at once. When the jaws are set and the patient cannot swallow, place the granule on the inside of the lower lip and it will act as quickly as a hyperdermic. In one case, where the jaws were set and the spasms came every three minutes by the watch, the first granule stopped the spasm and the jaws relaxed the next day. In this case no wound was discovered and the cause was unknown.

In another case, where there was a wound on the arm, the granule of Hyoscyamine was given every fifteen minutes until the pupils dilated and the action kept up at longer intervals. The best application to the wound I found to be hot Epsom water, which relieved pain at once. In infantile paralysis no serum is required. Keep the system under the influence of veratrine, attend to the bowels and the trouble ends. In diphtheria, saturate the system with pure calcium sulphide (the infusion is no better than some of the tinctures and extracts dispensed), or better yet, Boyle's double sulphide.

Let the poor old horse alone. Forty years' experience without the loss of a single case put in the balance along with the serum therapy and note the result.

When the diphtheria epidemic was at Johns Hopkins Hospital, and all Baltimore was excited, I wrote to the *Baltimore American* that, if the disease was threatened, one should go to a drug store, get five cents' worth of sodium bi-sulphide, put a teaspoonful of it in a tumbler of water and of this give a teaspoonful three times a day, and no case would develop. They would not publish this, but if Flexner announces a serum it is put in big letters in the paper.

My advice is to use drugs of known strength (alkaloids), dose enough to effect, and there will be less of this tomfoolery of serums and Christian Science.

GEO. ROBERTS, M.D.,
One of the boys of '68 of Penna. University.

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The Business Side

OF MEDICAL PRACTICE

While we, as physicians, desire to be scientific students and practitioners of medicine, yet we desire also, for the welfare of our dependent ones and for the sake of our standing in the community, to secure a fair compensation for the services we render to our fellowmen.

The Lure of the Land and the Middle-Aged Doctor.

By THOMAS S. BLAIR, M.D.,
Harrisburg, Pa.

(*Third Paper.*)

FLORIDA LAND.

Florida is a rapidly developing State, much area of which is seriously in need of drainage, some is land of no particular value, but the area of good soil condition is larger than most Northern people believe. There are large timber tracts and much "cut over" land. The rainfall is quite large, but about 70 per cent. of it falls during "rainy season" (June, July, August and September), while the rest is precipitated at intervals during the rest of the year. Naturally, the distribution of the rainfall varies somewhat in different sections. In the very porous land the water sinks away very rapidly and irrigation may be profitable and can be readily accomplished by pumping from wells. Where the subsoil is of a heavy character, too much of the water runs away and drainage ditches are a necessity. Deep or subsoil plowing helps to make the land more receptive of moisture, but irrigation is sometimes employed with advantage upon these soils. Many of the soils of Florida are very fertile, but in general it is a State very much dependent upon commercial fertilizers. These latter are expensive, but the irrigation used is easy of application and water is cheap. One should be careful as to the quality of water upon land he may purchase in Florida, since much of it is impregnated with sulphur.

Florida has a sub-tropical climate, subject to rather sudden changes of temperature. Disastrous frosts sometimes occur and citrus fruits have been badly frozen occasionally. Nevertheless, the citrus industry is flourishing even if a bit hazardous. Mean annual temperatures mean very little. The mean for Florida is about 70 or 71 degrees, with a mean of 57 in January and 81 in July. Southern California has an annual mean of 61, with a mean of 52 to 54 in January and 67 to 69 in July. Winters are warmer in Florida than in California, while the Florida summers are very much warmer, partly due to increased humidity. With the exception of the occasional cold spell, Florida winters are more pleasant to the tourist and are more active growing seasons than are the California winters. Summer is more comfortable in California, but an Eastern man dislikes the sun-glare and the constant dust of the California summer. The Southern coast climate of California is a mean or compromise between the yearly climate of the Middle States and of Florida. From October to May Florida climate is delightful and, while temperatures the rest of the year seldom exceed the maximum of the Atlantic coast cities of the North, there is a consistent and persistent heat, tempered somewhat by breezes and falling appreciably at night. Insects abound over the greater area of Florida during the summer. To the person who can sleep during the heat of the day and who does not have to work hard, Florida summers are much more tolerable than most Northern people think, but there is no discounting the fact that work under the conditions of the Florida summers is irksome and debilitating to a person unaccustomed to the climate. Nature evens things up. The southwestern summers are dry as a bone and the dust becomes intolerable except where there is constant irrigation, but the temperature is equable and the nights are cool, insects are not so numerous and there is little humidity. Florida summers are hot, but are far from dusty, and vegetation does not dry up like it does in the southwestern country. Unless one is growing tobacco, sweet potatoes and certain fruits or handling considerable stock, one does not have to work so hard during the heated spell in Florida. It is the winter crop that pays the best in Florida, and much of the land remains idle during the summer, or is sowed to some forage crop. Corn and other cereals are not particularly profitable in Florida, although grown with success. The cereal farmer will do better in the "corn belt" and the North and West.

Land is gambled with extensively in Florida. Northern investors and new set-

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tlers cannot be too careful as regards purchases. It is sheer folly for the middle-aged doctor to settle upon cut-over or uncleared land. They are charging $30 to $50 per acre for this land, miles away from the principal cities. Its possibilities are great, but it is impossible for the average man to realize upon them. Much of this land is quite fertile, and removing the stumps is not half of the work needed to get it under cultivation, since grubbing out palmetto, tree and bush roots, making drains, etc., are all desperately hard work, and, if you get it done by others, costs as much as the land. Some hardy men succeed upon this land, but it is emphatically not a proposition for a doctor, nor is it a good investment for a distant doctor. This land is like unirrigated land in the southwest—not worth the taxes until developed. Semi-tropical land soon reverts unless kept under cultivation, and such land freshly broken to the plow yields poorly for a year or two. Florida wet lands will never be worth buying until the Federal government or the State drains them in large areas. Very sandy land in Florida is a great fertilizer consumer. To the doctor who wants to cultivate Florida land the best advice would be to buy near to large cities and pay at least $200 per acre for the land. Some land adapted to celery and special crops and close to market brings very high prices.

Florida is an all-the-year producer, but that sort of thing exhausts land and tons of commercial fertilizers are necessary to keep it up upon the same land for long. We would not advise the doctor to try it until after he has learned the land and the crops by long residence in Florida. Deciduous fruits, such as peaches, do well in Florida, although apples are not a factor; but there are no especial inducements in Florida for the orchardist except for the citrus and other semi-tropical fruits. California is better for most of the deciduous fruits and for grapes, and this is largely due to the dry summers there promoting the drying of peaches, apricots, pears and prunes. Raisins are profitable in California but do not do well in Florida. Pineapples are profitably grown in Florida alone of all of the States. Bananas thrive in Florida, but are not much of a factor commercially; they are gross feeders and the wind rips their tender leaves into ribbons and makes them unsightly. Citrus fruits in Florida are a moderate success promising to further develop. The Florida growers have an advantage over the California product in that the Florida oranges catch the early winter market and the shipping distance is less, but the California season for oranges is very much longer than is the Florida season. In both States orange growing is not a poor man's game, as will be indicated in our article upon California. Lemons do better in California and are a hazardous crop in Florida. There is a constant fear of European competition with lemons, and it is only the tariff that renders lemon growing profitable in America. Grape fruit has a limited market and should not be largely grown. Small fruits do well in Florida, but their season is short; fortunately for the grower, it is when they bring large prices in the northern cities. Sweeping rain storms are very apt to damage or ruin the strawberries in Florida unless unusual precautions are taken. Northern people would better study the strawberry situation before planning them there.

But the *real* opening for the man of average means in Florida is the winter truck raising. Florida has an immense advantage in this business, owing to her warm winters and the easy rail and water distance to the large markets. The northern doctor can live very comfortably in Florida by securing a few acres of the best vegetable land and specializing wholly along this line, except for his home garden and orchard planted to a little of everything. The winter vegetable garden in Florida is begun about the first of September, according to season, and planting for succession or of tender vegetables is continued until May and then stopped entirely.

No sweet potatoes are grown nor late crops of tender vegetables, such as tomatoes or eggplant. During June very little is done except to gather the later products then covering but a part of the ground. As things come out, plant cowpeas and let the ground alone until September, then plow the cowpeas under for fertilizer.

By this plan one need do little farming during the hottest weather, except keep up the private garden and feed the chickens, and yet conduct a very profitable truck farm. One of our acquaintances has a truck farm for winter work in Florida and another one for summer work in Pennsylvania. Some truckers leave Florida for mountain country during the heated season.

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A physician trucking in Florida must expect to employ considerable labor. Labor is cheap there compared with California. Houses are cheaply built in Florida. There is a fair opening in medical practice and the State Board is not unduly hard to pass. There is a chance to gradually branch out with specialties during the winter tourist season, and orange growing as well as tobacco raising may be made profitable after the doctor has learned conditions.

In removing to Florida, there are many annoyances which time mitigates somewhat, or one learns how to meet them. Insects can be successfully kept within bounds even in Florida, but clothing and house furnishing must be modified because of the plague of mildew. One practically *must* raise chickens to supply fresh meat. There is very little beef used, hogs are inferior, but the fish are excellent. Negroes get upon the nerves of some people, but they are all but a necessity in that country. Certainly Florida is a beautiful country and possesses many advantages. One must accept a few disadvantages, modify one's life to suit the environment, be careful of the summer sun and be temperate. There is no reason why the middle-aged doctor may not be happy and moderately prosperous in Florida, provided he steers clear of real estate swindlers and uses good judgment in his work, but do not expect to make $500 per acre.

(Our next issue will discuss California.)

Land Investment in California.

To The Medical Council:

I have been noticing your editorials on the promotion schemes of the promotion companies of California and the other States, and wish to call the attention of the public, and the medical profession in particular, to the dangers of investing in the wild and unjustified claims of most of those schemes.

Now I am a resident of California for over forty years and am no knocker, for I believe the truth about California is enough, and if intending emigrants can be brought here and not robbed, there is room for thousands to make a success and enjoy the finest climate in the world. The schemes that are being worked up at present are mostly to get hold of large tracts of valley land at a low price, put it under an irrigation system and sell it at exorbitant prices, and flood the country with lurid tales of enormous profits. But there is one feature of the case that they never mention and that is the prevalence of fever in those irrigated colonies. I saw a number of families last summer who were driven out of the upper valleys with the fever of malaria. The water that escapes from the irrigating ditches settles in those low places all over the valleys and are breeding spots for the malarial mosquito. There are also many cases of typhoid fever in those new irrigation colonies.

Now, in comparison, in my estimation, the low foothill land of California, ranging from 250 feet altitude to 1,000 feet, is the paradise of this country. It was originally covered with live and white oak and digger pine. The land is either decomposed granite soils or a red soil from the decomposition of slate bedrock, and if one is careful one need never have a failure of crops. The granite land is adapted to the growth and maturing of all deciduous fruit, such as peaches, grapes and plums of all kinds, and the red soil will produce all these in perfection and will also produce apricots of a superior quality and oranges. There are a good many oranges being planted in the foothills here, and they are of the finest possible quality, and a peculiarity of the orange here is that it ripens for market two months before the oranges of Los Angeles County, and we get the early market.

The rolling foothills are comparatively free from the mosquito, the small ravines are developed with a small open ditch and no water is allowed to stand and stagnate. The temperature in the foothills is from 80 to 100 degrees in the summer and occasionally down to 30 degrees in the winter, and the rainy weather is in the winter. The roads on the granite soil are always good, summer and winter.

J. Mauson, M.D.

Lincoln, Placer Co., Cal.

The Alfred Marks Realty Corporation of New York are sending letters to physicians, offering them a lot "complimentary" in their promotion of land on Long Island, called "Patchague Estates," as they say "for advertising advantages." Of course, no physician of average intelligence will bite at this ancient bait. Dr. William A. Armstrong, of Philadelphia, has kindly furnished us with the information in this case.

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Investment in the Securities of the Western Coast of the United States.

When it comes to hard-headed conservatism, commend us to the world. The English and other foreign investors have little outlet at home for their excess capital except at very low rates of interest, and they have been heavy purchasers of the class of securities we are here considering. The East has been afraid of them, but we have been learning that business in the West is generally as capably managed as in the East, and that industry there pays a higher rate for money than we of the East. In the Western States the legal rate of interest is higher (on the average) than in the Eastern States. And, in order also to attract outside capital, Western securities are made to yield generally a full 6 per cent.

Municipal bonds of the coast are generally as well secured as are those of older States. The great development of hydro-electric companies has floated an immense sum in securities, and many of them offer a most secure investment, but others do not. It is well to buy the securities of established companies regularly listed, even if one must pay a premium. These bonds are not readily secured at par. Fiscal agents have an eye open for such new issues as appear and sweat a good margin out of them before the distant investor ever hears of them. When they reach the real investor they yield but 5 per cent.

If one is upon the ground and is a capable judge of the practicability of the new power ventures, he may get slightly below par promising .6 per cent. bonds. There is an excellent chance for practical men to make money in some of the new hydro-electric company issues. West coast oil fields are pretty well developed, and so many factors enter into the exploitation of new companies that their securities must be looked upon as speculative. Lumber is a money-making industry, but one must be careful the bonds do not rest too much upon the value of standing timber that is located in large or contiguous tracts. There is no fire insurance for standing timber. Aside from this element of risk, many of the lumber concerns offer excellent paper.

Industrial securities do not offer as safe an investment in the West as do the public carriers, electric companies, gas companies and other franchise holders of the cities. But when the Panama Canal is finished, it is probable the Western factories will get cheaper coal and will be more able to compete with the East in manufacture. The Eastern people know little about irrigation, and cannot judge between a good and a bad irrigation company. There are both kinds.

There is no good reason why the Eastern investor may not profit by the larger rates of interest yielded by Western securities. If carefully bought as one would buy Eastern bonds or stocks, they offer as reasonable security. But brokers and others are most active in securing these securities, sweating from ½ to 1 per cent. out of them and offering them at a premium to yield a flat 5 per cent. If one has much of a sum to invest and cares for Western bonds, his best plan is to go out there and negotiate his purchases as nearly directly as possible.

It seems quite unnecessary to caution readers against the Western land companies placing flamboyant advertisements in Eastern papers, the get-rich-quick mining companies, the cheap-stock oil companies, and the many other *alleged* investments which any discriminating student of markets and securities understands are the offerings of sharpers whose plant in the East is played out and who have gone West in search of new pastures.

Swindling Insurance Companies.

For the past five years there has been a great boom in the organization of wild-cat life insurance companies—not to insure lives, but to *sell stock*. They go to the person with small amounts of money to spare and show what great things the few successful and old-established companies have done, and convey the idea that they can do as well or even better. They conceal the

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fact that the profits of the old companies were secured by the great number of lapses or forfeitures, which are now contrary to law. None of these old companies are making large profits now, and the new companies are making none at all. To hold stock in them is to be in danger of holding a liability instead of an asset.

Even worse can be said of the new fire and accident companies that are springing up like mushrooms all over the country. The most of them are swindles, outright. Now is not a good time to go into the insurance business. The laws enacted within the past few years have greatly restricted the opportunities for enormous profits—to the benefit of the insuring public.

We have received inquiries regarding many concerns—the United Five and Ten Cent Stores, the Ithaca Clock Company, the American Telegraph Typewriter Company, the International Automobile and Engine Company, the Medical Product Company, American Druggists' Syndicate, the Christian Food Company, the Enteronol Company, and others. While not having space to go into the merits of each one individually, we believe them all to be far too speculative in character to be good enterprises for the doctor to put his hard-earned money. He wants, first of all, absolute safety of his principal, and then whatever profits an assuredly safe enterprise can bring him. You would better consult your banker before making any outside investments.

Oklahoma a Very Progressive State.

Not only for her advanced Constitution is Oklahoma to be admired and praised. She looks after the welfare of her humblest citizens, protecting them against stock fakers and swindling promotion schemes. Notice the following proclamation by the State Bank Commissioner, as printed in *Davis' Magazine of Medicine:*

To the People of Oklahoma:

The State Banking Department has established a Bureau for the purpose of giving information as to financial standing of companies whose stock is offered for sale to the people of our State. If you are offered any stock, and want information as to the financial standing of such companies offering the same, before investing, please write this Department, and I will furnish you all the information that I can obtain.

J. D. Lankford, State Bank Commissioner.

BOOK REVIEWS

TUMORS, INNOCENT AND MALIGNANT: THEIR CLINICAL CHARACTERISTICS AND APPROPRIATE TREATMENT. By J. Bland-Sutton, F.R.C.S., Surgeon to and member of the Cancer Investigation Committee of the Middlesex Hospital, etc., etc.; 5th edition, 671 pages, 355 engravings. Cloth bound; price, $5. Published by Cassell & Co., London and New York. Selling agents for this country, Funk & Wagnalls Co., New York City.

One riding through a forest is impressed by the excrescences he observes upon many trees. One who is devoting a large portion of his time to taking care of animals cannot help observing the many tumors or growths with which they are afflicted. The human race likewise is subject to a great variety of tumors, which are not only different in their character and growth as tumors, but which have different characteristics in the different tissues in or upon which they grow. There is a mistaken opinion among many strictly medical men that this subject belongs exclusively to surgery. There could be no greater mistake made, as almost invariably the medical man sees these growths, and many times keeps them under observation, until they have become beyond the reach of surgical aid. There is no more important subject for the general practicing physician than the subject of tumors in its broadest aspect. Dr. Sutton has practically devoted his whole life to this subject and speaks with authority.

When a tumor first makes its appearance it is most important that it be ascertained whether it is of a benign or a malignant character. The supreme interests of the patient and of his family demand this. It is a disgrace to our profession for a physician to say to his patient, "Oh, that is of no importance, let it alone," when a cancer is rapidly developing which, unless recognized and properly treated in the earliest stage, will quickly take the patient's life.

In this work Dr. Sutton includes all the innocent tumors, such as pigmented tumors, moles, warts, horns, cysts, etc., as well as the malignant tumors, such as sarcoma, carcinoma, epithelioma, etc.; he also considers each organ and tissue of the body in relation to the tumors which develop therein. As much detailed information as possible is given under the subject of diagnosis, as this is a matter of first importance.

As to treatment, there is no subject in which improvements in treatment are being made more rapidly than in the treatment of malignant growths. The treatment given in this book

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is, of course, up to date with the publication of the book. In general, surgery, X-ray, and radium are the principal remedies.

It is much more important that the physician purchase such works as these, which represent the life work of a scientist devoting especial attention to one important subject, than that he buy the various so-called "systems" or "textbooks" of an encyclopedic character, which endeavor to cover the whole range of medicine. Instead of buying another work on practice covering the same ground as all the others have, buy Sutton's work on tumors and read it studiously and keep it for constant reference. Be sure to ask for the Fifth Edition.

"Obscene" Literature and Constitutional Law. A Forensic Defense of the Freedom of the Press. By Theodore Schroeder, Legal Counsellor to the Medico-Legal Society of New York, etc. Cloth, 439 pages. Privately printed by the author, 56 E. 59th St., New York City.

Our readers are well acquainted with Mr. Schroeder, a distinguished member of the New York Bar, through his contributions to The Medical Council on medico-legal subjects.

This book is a collection of very thorough and thoughtful articles relating to the freedom of the press in its broader aspect, and especially in its relation to the discussion of subjects relating to sex. The reader will be very much surprised to find how many persons have been prosecuted, or we should rather say persecuted, for the offense of speaking plainly when plain speech was necessary. We hope Mr. Schroeder's efforts will lead to a more liberal policy on the part of the United States in regard to discussion of subjects relating to sex where it is evidently beneficial that they should be discussed.

Radiumtherapy. By Louis Wickman, M.D., Physician at Saint Lazare, Paris, etc., etc., and Dr. DeGrais, Chief of the Laboratory of the Hospital of Saint Lazare, Paris, etc., etc. Translated by S. Ernest Dore, M.D. Cantab. M. R. C. P. Cloth, 305 pages, profusely illustrated. Price, $5, net. Published by Cassell & Co., London and New York. Selling agents for this country, Funk & Wagnalls Co., New York City.

The world was truly startled when Mme. Curie and her husband announced the discovery of a mineral agent which emanated rays different from any which had been heretofore known. It is difficult for one not an expert in chemistry to understand the principles by which radium acts. Yet, working by experimentation, intelligently guided by theory, a valuable mine of useful information has been brought within the reach of the practicing physician.

In this work we have, first, the physics of radium, next the use of instruments and apparatus, including measurement, dosage, technique, and methods of operation. The third part, being by far the most extensive, is devoted to clinical therapeutics. In this we have the treatment of malignant growths, keloids, disfiguring scars, angiomata, pigmentary nevi, external tuberculosis, pruitus, eczema, with the application of radium also to gynecology and other phases of practice. Many of the colored plates show what wonderful results have been otained in the treatment of malignant growths. There is certainly room for a profitable practice for at least one physician in each community by the aid of this remarkable agent. We advise every reader to procure this work, and, after a careful study of it, put its teachings into practice for the benefit of the many patients within the range of his practice.

Handbook of Suggestive Therapeutics and Applied Hypnotism. By Henry S. Munro, M.D.; 3d edition, revised and enlarged. Cloth, 409 pages; price, $4. Published by C. V. Mosby Co., St. Louis, Mo.

Dr. Munro has for many years devoted especial attention to consideration of the mind, its influence upon the body and the treatment of disease through the agency of the mind. He has endeavored to separate the glamor of charlatanry from that which is scientific and reliable. In this work he gives the scientific basis of psycho-therapy, its general utility and its relation to the practice of medicine. Both suggestion and hypnotism are carefully treated. As applied in every day practice, he speaks of its application in insomnia, headaches, psychasthenia, and a large number of other diseased conditions, its application in anesthesia, in obstetrics, and the psycho-neuroses. There is a chapter upon treating the sub-conscious self, one on conservation of energy, one on the abuse of personality, and one on self-mastery as a fine art, as well as many other chapters upon subjects more or less relating to psychic science. We believe every physician who reads this will obtain much more benefit than it costs him in the expenditure of time and money.

The International Medical Annual for 1911. A Year Book of Treatment and Practitioners' Index. By various contributors. Cloth, 748 pages, illustrated. Price, $3.50. Published by E. B. Treat & Co., 243 W. 23d St., New York City.

We have noticed the regular appearance of this book for the past twenty-nine years, and are glad to state that the present volume is not only up to the previous standard, but even sets some marks ahead. It is a good review of the year's literature.

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ONE THOUSAND SURGICAL SUGGESTIONS. By Walter M. Brickner, B.S., M.D., Adjunct Surgeon to Mount Sinai Hospital, etc.; 228 pages. Cloth binding, $1.00; leather binding, $2.25. Published by Surgery Publishing Co., 92 William St., New York City.

Any one acquainted with the accomplished editor of the *American Journal of Surgery* will look for a work of the highest class from his pen. In this volume he has fully lived up to his reputation. These practical brevities in diagnosis and treatment will be of instant aid in many a puzzling situation. We most heartily commend the book to our readers.

"Successful Medicine."

TO THE EDITOR OF THE MEDICAL COUNCIL:

With your kind indulgence I want to bring an important message to your readers. I am going to alternate "Physiologic Therapeutics" with "another new journal," which will carry the very attractive title, "Successful Medicine." I believe that many of your readers will welcome this new journal, as it is to be a journal of *commercial medicine*, devoted solely to that side of practice which directly concerns the dollars and cents, published with the main idea of making its readers better paid men than the bricklayers or other skilled laborers, who gain their skill with practically no cost, and who earn more than many doctors.

The financial side of practice is mighty important. They talk about the "science of medicine," or the "art of medicine," but, if I am not badly mistaken, the dollars-and-cents side of medicine has been too lightly considered. Not, mind you, that the scientific and altruistic side of the doctor's work is depreciated. Far from it. Medicine to-day is filled with honest, scientific workers, and with men always ready to help the under-dog when opportunity affords; but think of an average of $700 a year as the income of the average American physician. Remember, too, that medicine unfortunately takes no note of the eight-hour law.

"Successful Medicine" will deal with the problems of the physician in his office, and especially with those which concern the business of getting results *and the money for it*. It will be published bi-monthly, beginning in September. It will be regular magazine size, with a minimum of 48 pages, and the price will be only 25 cents a year! Since this journal will be devoted to commercial medicine, surely every reader of THE COUNCIL will be interested. How many will subscribe in advance of publication?

Cordially yours,

HENRY R. HORROWER, M.D.

60 W. Randolph street, Chicago.

The Cause and Specific Cure of Hay Fever. Published by Fritsche Brothers, Beekman street, New York.

This is a very instructive and interesting pamphlet, giving a scientific account of the cause of hay fever and its specific treatment. It will be supplied gratis to any of our readers who will request it.

Town Lots in additions "not over two miles from somewhere" are a snare and delusion. Enough money has been received from the initial payments made on lots in additions to some of our Oklahoma towns to have paid the running expenses of the State, and to-day these additions are but poor farm lands. Two years ago I was called a knocker because I would not pay $250 for a lot three miles from town. To-day the survey stakes are barely visible, and what few buildings were put up are vacant or being moved to town. Better keep your money and let these town lots alone, unless you live within a few blocks of them and know all about them.—*Davis' Magazine of Medicine.*

Readers asking about the value of any stock or other proposition should send with the inquiry any circulars or other literature they have received, so that we may have a proper basis for investigation.

Doctor, what are the three most prevalent diseases in your practice by number of cases?

In what diseases or surgical conditions does the general family physician most need practical instruction, based upon your own experience and also upon your observation of others?

What subjects would you like treated in the near future in THE MEDICAL COUNCIL.

J. J. TAYLOR, M.D.

4105 Walnut street, Philadelphia, Pa.

Dear Doctor: I received the Physicians' Pocket Account Book, also the Blood Scale, in good shape. The scale for blood testing is a fine thing for a physician, and the Account Book is the best method of keeping accounts I have ever had the pleasure of seeing or owning. Ever since I started practice I have been looking for a book that could be carried in the pocket and at the same time could be depended upon for keeping my accounts each day. I have bought each and every kind of account book that was ever published, I guess, and before I received this one I was still looking for something that would suit me. To be exact, I think I have spent no less than $75.00 in such things, and at the present time have sets of the different books and methods for keeping accounts. Some of them are in handsome oak cabinets, but the cabinet is the only thing that is of value. I would only be too glad to make them a present to any one that would take them away. To make a long story short, the little book you sent me is exactly what I have wanted and answers every requirement. It is complete in every way so far as I can see. For the life of me, I cannot see how you can afford to sell such a book for $1.00. Once a doctor has seen the little book I cannot understand how he could very well refuse to buy one and be willing to pay five dollars instead of one for it. I suppose there will be no trouble in getting another book when this one is full. If you think there will, please let me know, and I will send for a quantity of them. I certainly do not want to run the chances of not being able to get another after finding one that suits me.

Very truly yours,

C. W. HENDRICKSON, M.D.

Huntingdon, Long Island, N. Y.

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THE

Medical Council

A MONTHLY JOURNAL FOR THE PHYSICIAN AND SURGEON.

"WE FIND WISDOM AND STRENGTH IN COUNCIL."

J. J. TAYLOR, M.D. Editor and Publisher | PHILADELPHIA, PA. | 4105 Walnut Street

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Medical Books of the Present Day.

The science of medicine is peculiar in the fact that there are so very many workers in it, each one of whom is a possible original investigator and may add something to its store of facts or principles. This, of course, leads to the publication of a large number of books and makes our science one of constant change. It would be well if this were the only cause for the publication of books on the various phases of medical science, as this is a perfectly legitimate cause. However, there are other causes which prompt the publication of a vastly larger number of books than this one, namely, the ambition of would-be authors and the commercial instincts of publishers.

In a trial in this city a few years ago in regard to the supposed murder of a priest, a well-known medical man and politician, the author of a work upon materia medica and therapeutics, testified as to the physiological action of opium and the condition which would be found in the corpse of one poisoned by opium. The medical expert on the other side had only to turn to this author's work and read what he had to say under the heading of opium, to contradict and completely refute his oral testimony. In his confusion he said that parts of the work were prepared by an assistant and that he merely revised it. We happened to know the assistant and to know that he had written about all the work, although his name did not appear in the book. A similar case took place in a celebrated trial a few months ago in regard to a certain beverage which the Government was trying to exclude from use. A chemist of world-wide renown, and also a well-known professor of therapeutics, each one being the author of a standard text-book in his branch, both testified that caffeine is not a poison. They were both confronted by their own books in which the statement was made that caffeine is a poison. They both admitted that they had copied the matter from some other work, and conceded that not everything in their books was true.

This brings us to the consideration of how many medical books are prepared. A professor in a medical college feels that he must issue a book in order to add dignity to his position. He then, by the aid of medical assistants, stenographers and typewriters, prepares a book, giving in garbled style a rehash of what has been better said many times before, with possibly a very little original matter of his own. Again, a publisher, in order to properly go before the profession, must have a book upon each one of the leading subjects in medicine. So he sets about to find authors who will prepare these books for him. This is all wrong from both standpoints.

The only justification for the preparation of a new book should be that the author,

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by reason of original investigation or of unusual opportunities for observation, has developed *new* facts or principles, which will add to the sum of medical knowledge. Hence, the volumes that are of the greatest value to the physician are the monographs written by the men who have devoted more or less of their lives to the investigation and elaboration of a given subject and have come before the profession with something really worth while to say.

We have in this city three large and well-established medical colleges. A prominent professor in each one has found it necessary to write a complete book upon the practice of medicine, taking up all subjects from abscess to zoster. Now, it is hardly probable that any one of them has had original experience with nearly all of the diseases treated upon; hence, he must have copied from other sources what he has to say in regard to the greater part of the subjects treated. Each one of the diseases is outlined in the stereotyped manner, and a very brief statement given of each division of it—as, definition, etiology, diagnosis, treatment, etc. How much better it would have been if, for example, Tyson had devoted himself to diseases of the digestive tract, Anders to diseases of the respiratory organs, and Hare to diseases of the circulatory system, and each one, by his investigations and original work, had made himself an authority upon his particular specialty. Being men of acknowledged scientific ability, they might thus have given to the profession, each one in his own line, a book that would stand as a monument to their original work, instead of being known only as more or less thorough compilers. We have one author in this city who, although not by any means advanced in years, has assumed to write standard text-books upon nearly all of the principal subjects of medicine—practice, materia medica and therapeutics, medical diagnosis, etc. Although acknowledged to be able and brilliant, yet by such voluminous authorship he can give very little positive knowledge. His books are plentifully sprinkled with such expressions as "it is said that," etc., "so and so has been recommended," and other like expressions.

The great calamity about these professorial works on Practice is that each disease is necessarily treated so briefly that the reader gets no adequate or complete knowledge about any one. The same may be said about similar works on Materia Medica and Therapeutics—there is not space for the proper treatment of each remedy. What author, for instance, gives under each remedy any proper knowledge of its untoward effects? Yet how important!

The same may be said of the numerous general works upon Surgery.

Why should one think it necessary to buy four or five books upon practice, each one wearily covering the same subjects in the same way, when he has not a copy of, say, Bland-Sutton's "Tumors, Innocent and Malignant," or Butlin & Spencer's "Diseases of the Tongue," or Wickham & De-Grais' "Radium Therapy"? When will our American physicians and surgeons learn that they can contribute to the advance of medical science only by investigating a particular field and publishing their original observations?

We have, however, another class of books even worse than those previously mentioned, namely, the encyclopedic "systems" and "text-books," prepared by a large number of authors under the guidance of one, called the editor. We have observed the preparation of material for such works. The authors of the different sections, realizing that they have very little individuality, credit or responsibility, dash off the matter through the agency of the typewriter, with the least possible expenditure of time and trouble to themselves. For years we have advised our readers against the purchase of such works. They are never regarded as authority, and they are out of date usually with the month of publication.

The purchase price of medical books is a mere trifle compared to the valuable time spent in reading them. A physician could, by reading an hour a day, become thor-

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oughly educated in the various branches of medical science, provided he could be supplied with thorough, complete and reliable books which give the information without duplication.

In this country books are now sold almost altogether through the efforts of persuasive agents, because publishers have so very little to offer which would be attractive to the purchaser upon the merits of the books themselves. We hope to see a revolution in the method of preparing medical books in this country, when the interests of the publisher and the ambition of the author will have very little to do with the appearance of the books, but each worker will embody in a modest volume the results of his thorough and painstaking investigation.

Prophylactic Inoculation Against Hay Fever.

Hay fever is caused by a soluble toxin found in the pollen of certain grasses. Patients susceptible to this form of poisoning may be detected during any season of the year by dropping a little of an extract of grass pollen into the eye of the suspected individual. If the reaction be positive, a reddening there will occur, a reddening of the caruncula and, to a lesser degree, of the palpebral conjunctiva, together with a slight injection of the vessels of the ocular conjunctiva, and some lacrymation, burning and itching. In about five minutes the symptoms begin to decline, and after a half hour the eye resumes its normal condition. In some individuals there may be sneezing.

Practically any pollen may be used for obtaining the reaction, but that employed by Noon* is one part of the pollen of timothy grass *(phleum pratense)* to 50 parts of distilled water, its extraction being aided by freezing and thawing several times. When thus prepared the liquid is placed in small sealed ampulloe, the ampulloe being boiled for ten minutes. It is then ready for dilution at the time of use, one part in five thousand being sufficient to excite a distinct reaction in the conjunctiva of a very sensitive patient.

Dunbar has shown that the pollen toxin gives rise in animals to the production of an antitoxin, having the specific power of neutralizing the person of hay fever. Upon this theory is based the use of a specific serum, such as pollantin. If an active immunity could be induced in hay fever patients by the inoculations of pollen toxin, a permanent cure might be hoped for. Noon has placed a unit of pollen toxin, that quantity which can be extracted from the thousandth part of a milligram of timothy grass, to which standard extracts of other pollens may readily be standardized by comparative tests on the eyes of hay fever patients. Normal individuals fail to react with the strongest extract, which, according to Morris' scale, would be 20,000 units, or even resist the application of fresh pollen dust directly to the conjunctiva.

Patients receiving immunizing treatment receive at first, subcutaneously, very minute doses at intervals of a week or ten days. When the resistance has been considerably raised the dose is increased, with the result that a negative phase, to borrow a term from the opsonic index, is produced, after which the resistance rises until it passes beyond its former maximum. Should an overdose be administered, a genuine attack of hay fever may be brought on, which will, however, last but a day or so, provided it is not the season for a regular outbreak of hay fever. Immunization treatment, therefore, should be commenced early in the winter, or, if grave, during May, June or July. The greatest care should be exercised to see that the dose is small and accurately controlled by the ocular reaction. The number of experiments performed is still too small to decide definitely as to the efficiency and the permanency of the cure effected through the use of these hyperdermic injections of pollen extract.

Instead of the Hypodermic, if there is no great hurry, give morphine in a teaspoonful of hot water.

*Lancet, June 10, 1911.

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The Use of Magnesium Sulphate in the Treatment of Tetanus.

It would seem that, by means of magnesium sulphate, complete muscular relaxation may be obtained in nearly all cases of tetanus, the convulsion being modified and the pain relieved. As it produces local anesthesia, this fact may be taken advantage of previous to the injection of tetanus antitoxin.

According to Holmes,* this is best done by lumbar puncture, with the patient in the sitting position, the initial dose being about twelve cubic centimeters of a 12½ per cent. solution of magnesium sulphate. The second injection may be increased in amount, using the same strength, or ten cubic centimeters of a 25 per cent. solution may be employed. This remedy is always at hand, and should be administered as soon as the diagnosis is made, while waiting for the antitoxin. In animals the curative effect is most marvelous, and the literature contains a number of cases where cure followed the use of magnesium sulphate without another form of treatment.

The Continuous Method of Introducing Liquid into the Rectum.

Dr. J. B. Murphy, of Chicago, is known the world over for his ingenious button, by the use of which the several portions of the intestines may be united, or two parts connected together—as the gall-bladder and the duodenum. While this discovery was epoch-making, another practical device of his has done much more to alleviate suffering and to save life than his button. We refer to the continuous method of introducing fluid by the drop method into the rectum, or what is known as proctolysis. While there are many ingenious devices on the market for this purpose, the ingenuity of the physician will usually be able to supply everything that is needed for this purpose from the apparatus readily at his command. Thus, a tea-kettle, wicking, the cut bulb of a syringe, with the tubing lying on a hot water bag, and the ordinary ending of an enema syringe will readily supply the desired apparatus from the things found in the house. These injections are not only useful in case of peritonitis, but also in diphtheria and many other conditions.

*Merck's Archives, June, 1911.

The Occurrence of Tetanus Following the Giving of Quinine Hypodermically.

So many cases of tetanus have developed after the administration of hypodermics of quinine, that MacGilchrist advises the giving of tetanus antitoxin as a prophylactic in these cases, as it seems that the quinine destroys the tissues of the neighborhood in such a manner as to make this a favorite seat for the growth of the tetanus spores, even though injected elsewhere in the body.

Typhoid Vaccines.

All recruits to the United States army under the age of 35 years must now submit to anti-typhoid inoculation. Callison believes the reason that the vaccine treatment of typhoid fever has not met with the success which it should have is because the dosage has been too small. He administers four or more injections of 500,000,000 bacteria each at intervals of two or three days. Vaccination should certainly be performed in all typhoid-bacillus carriers.

To practice, one must read;
To write, one must practice.

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Sentences, like sunbeams, burn deepest when most condensed.

The Problem of "Nervous Indigestion."

By George M. Niles, M.D.,
Atlanta.

To the physician who has honestly endeavored to drink deep from the Pierian Spring, this problem is significant—ofttimes vexing. To be just to the patient, to safely eliminate surgical contingencies, to either coax or compel an unstable or capricious digestive apparatus into furnishing the body a sufficiency of available nourishment—these are only a part of the whole problem as it is so frequently presented to the gastroenterologist.

These sufferers come to us in various forms; their alimentary tracts present disturbed secretion, sensation and motility, while the psychic relations are generally the most awry. They constitute a generous percentage of the habitual invalids who throng the health resorts and sanatoria, who patronize the freak cures and freakier "curists," who subscribe to the new cults and fads, and who furnish the predatory fakirs much of their income.

These true neurotic types are seldom found in either the extremes or near-extremes of life, but in those past the twenties and under the fifties—those at the age to care for themselves or others. In children the digestive organs are less impressionable, while in those past the prime of life there seems to be established an immunity; or, on the other hand, they have learned by experience how to side-step such habits or articles of food as are injurious.

This "nervous indigestion" is seldom found among those who earn their bread by manual labor, or among the uneducated and unrefined. Those who labor with their brains, whose nerves are tense, the votaries of the "strenuous life," the eager spirits who burn the candle at both ends—they are the principal sufferers.

Contrary to the reports of some well-posted observers, who claim to find a majority of these neuroses in women, my experience has led me to believe that fully as many men are affected. While women have more time to complain, and seem, in a manner, to possess more sensitive reflexes, men come more directly in contact with the issues of daily life, often floundering among the shallows and breakers, until they suddenly discover digestive disorders cropping out, to their great discomfiture. Under such circumstances these wide-awake business or professional men begin to train their analytic powers on their own internal organs, and before they fully realize the danger of such a habit, they find themselves taking each meal, perhaps each mouthful, in a state of gastronomic introspection.

These patients crave relief. They are not posted on vicious circles, on inhibition, nor on hormones. They find it difficult to comprehend that the epigastrium is simply acting as a reflex alarm center for disorders, either material or psychic, entirely outside of that troublous zone. To minimize their sufferings, or to admonish them to "forget it," proves absolutely unsatisfactory to the patient and asinine in the physician.

Occasionally we can remove an irritating cause, but more often such causes as domestic infelicity, erotic longings, unsatisfied ambition, uncongenial environment, financial reverses, or carping care, are entirely beyond our reach.

In one of the inimitable Western tales written by Alfred Henry Lewis occurs the account of the death and burial of a highly esteemed gambler, on whose tombstone was inscribed this meaty epitaph: "Life is not in holding a good hand, but in playing a poor hand well."

This fitly applies to the problem now under consideration, as well as others in life.

To enter into the niceties of differential diagnosis in this necessarily brief paper would lead too far afield; so, passing this phase of the subject, eliminating as far as possible surgical indications, and being reasonably certain that no marked anatomic lesions nor important organic changes are underlying the outward digestive discomfort, it behooves us to outline some general plan calculated to meet and control the protean symptoms presented from day to day.

The line of treatment embodied in this study may not stand the test of therapeutic orthodoxy, but it has served me well in many instances, and, as an old ante-bellum negro said to me when a lad, that the only way to learn a thing was by "hard knocks

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and sudden jerks," some very trying experiences have forced me to evolve certain ideas which I deem at least worth a trial.

To begin, if practicable, the patient should receive a more thorough and painstaking examination than he has ever had. This serves the double purpose of placing the physician on a solid basis as to direct and indirect morbid conditions, while it satisfies the invalid that a real interest is being taken.

This examination will in every instance furnish a cue by which a preliminary treatment may be inaugurated. Right here let me emphasize that *treatment* is what the patient desires, and as an integral part of this treatment some form of medication meets both an intrinsic and psychic need. Should there be hyperchlorhydria, an oft-present neurosis, antacids sufficient to neutralize the excess will win the opening skirmish, and increase the physician's influence. A hypoacidity will naturally call for HCl, which may generally be combined to advantage with nux vomica and pepsin, though the pepsin, apart from being a good vehicle, possesses few of the virtues ascribed to it. Less than ten drops of the dilute HCl amounts to nothing, and more than thirty drops often proves irritating, so from twelve to twenty drops, well diluted, will give the best results. Occasionally we find achylic stomachs intolerant of any form of acid, and when this is the case it is useless to push it.

For the almost constant eructations, a combination of milk of magnesia and milk of asafetida, to which is added a small quantity of compound spirits of lavender, tincture of myrrh, or compound tincture of cardamom, may be given *ad libitum*. It is well also to be on the lookout for aerophagia, for when the eructations are frequent, explosive and odorless, they often consist of only swallowed atmospheric air. When this is the case, the patient should be admonished to keep the mouth closed while eating and swallowing, avoiding conversation while food is being masticated.

A point I consider almost the keynote of the treatment is to change the medicine in some way, even though it be simply a change of appearance every few days. These neurotic alimentary tracts must be kept guessing all the time; for, if they "get on to our curves," we at once lose a great part of our influence. I have often added to an alkaline powder of calcined magnesia and bismuth a little pulverized charcoal or carmine to the increased satisfaction of the patient. The active and indicated base of the prescription may remain the same, so long as the adjuvants are frequently varied.

Constipation is often present and should be managed like constipation complicating any other trouble, if only the watchword of frequent change is borne in mind.

The question of gastric lavage is somewhat a delicate one, for we occasionally encounter highly strung people who derive far more harm than good from this procedure. I might say as a general principle that, when there is a marked excess of stomach mucus or a delayed evacuation of the gastric contents, an alkaline or gently antiseptic lavage at not too frequent intervals is helpful; while for hypersensitiveness of the gastric mucosa a lavage containing forty grains of nitrate of silver to the pint, and followed by plain water, will often yield gratifying results. Routine lavage, however, is not in my opinion advisable.

Faradic electricity has proved satisfactory to me, though I confess the belief that its influence is mainly psychic. I use the intragastric electrode, if the patient does not object, or, if the objections are too strenuous, I apply the large epigastric pad in front with a smaller pad directly opposite on the back, administering the current strongly enough to be perceptibly but not uncomfortably felt.

As to massage, vibratory and otherwise, the same may be said.

Regarding the diet, I have often found the patient suffering more from errors of omission than commission. Either reasonably or not they have tabood one article of food after another, until they are ingesting hardly enough to nourish an infant in arms.

There was recently referred to me a young Cuban, who had, by easy stages, trimmed his diet down to a daily quantity of three glasses of malted milk, expecting to continue his work on this munificent allowance. On finding the gastric juices present in a workable quantity, I admonished him to begin eating, assuring him that if he would eat I would help him take care of it. Heeding my advice, he gained ten pounds in twelve days, ultimately making a perfect recovery.

So many of these nervous dyspeptics have developed a sitophobia, or morbid fear of food, that all the persuasive arts of the physician are demanded to keep them adequately nourished. Acting on the principle that "birds who can sing and won't sing

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must be made to sing," when I find present a decent amount of digestive juices, I endeavor with all my might to force these recalcitrant stomachs and intestines to do their duty, even though they do it complainingly.

For indifferent or finical appetites I use the stomachics condurango, calumba or nux vomica with compound tincture of gentian or cinchona as a base, changing them constantly, as I have previously indicated. Occasionally, where hypoacidity exists, three-grain doses of orexine, given two hours before meal time, will wonderfully cheer up an indifferent stomach.

Hydrotherapy is specially valuable in these conditions, aiding, as it does, the emunctories, cleansing the bodily Augean stables, relaxing the nervous tension and adding its quota of psychic uplift.

The benefits of hydrotherapy have not been appreciated as they should by the rank and file of the regular medical profession, and I consider it high time that we wake up to our opportunities in this important field, not relinquishing it to others, as we have to a regrettable extent.

Change of environment, or even of occupation, should be recommended at times; in fact, there are certain of these cases where a change, and the more radical the better, seems the only method by which the discouraged invalid may be started on the road to Wellville.

The whole plan of treatment is based on reinforcing the weakened digestive functions, wherever situated, pressing every procedure with kindly interest and sympathetic optimism, keeping the patient as busy as practicable, heading off doubts and fears, springing, if possible, some therapeutic surprise at every visit, encouraging each glimmering ray of hope, providing ample calories, so that bodily strength may promote nervous equilibrium, and, without slighting the main issues, taking cognizance of the countless little intercurrent and irritating ills always present.

This study I submit in the interest of that most unhappy and misunderstood class of sufferers, trusting that some of my suggestions may aid in restoring joy to troubled epigastriums, quietude to restless alimentary tracts, and springtime to repining hearts.

920-921 Candler Building.

That case of pruritus, which has been bothering you, may be an early sign of locomotor ataxia. Be on the lookout, and you may make a striking diagnosis through this piece of information.

Diagnosis of Diseases of the Ear With Special Reference to Symptomatology.*

By J. J. Crume, M.D.,
Amarillo, Texas.

In presenting a paper to this Association on this subject it shall be my purpose to give as practical an analysis of the symptoms accompanying the various pathological conditions as possible in a brief, concise way, in order that the aurist may the more easily arrive at a correct diagnosis of his respective cases.

Ninety-five per cent. of the patients who present themselves to us with ear troubles give a history of pain, discharge or deafness.

EXAMINATION.

There are four questions you are expected to answer after only a superficial, much less a thorough, examination.

(1) What is the matter with me?
(2) Can you cure me?
(3) How long will it take?
(4) What will it cost?

We will have to be able to answer the first one before we can approximately answer the last three.

We will first consider pain, its cause, character and significance.

PAIN.

When unaccompanied by other symptoms, it is insignificant as a diagnostic factor, in fact, may be misleading; but when attended by other symptoms, plays its part in the role of diagnosis.

Pain, alone, only tells us that a wrong exists, but does not point it out. Nor does the absence of it argue that we have no pathology in the ear. It may be produced (1) By a *local* inflammatory condition in the middle ear; (2) it may be *reflex*.

If reflex, the seat of trouble will nearly always be located in the teeth, tonsils or nose and will radiate *toward* the ear.

If local, the pain may be deep-seated or superficial, constant or intermittent and radiate *from* the ear.

If pain is due to some local inflammatory trouble you will, in almost every case, first have a simple otitis media, which may be the result of atmospheric influences, colds, influenza or adenoids, but, in most cases, it is the product of a nasopharyngitis transmitted through the Eustachian tube to the middle ear.

*Read before Texas State Medical Association, May 10, 1911.

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Pain, acute, lancinating, indicates a recent inflammatory process and is usually in the superficial tissues. If throbbing, there is usually an exudate of some character pressing upon the nerve filaments, either serum or pus, depending upon the acuteness or chronicity of the disease.

Pain radiating upward, forward or downward, is indicative of mastoiditis. I call to mind a mastoid case, a lady, who gave no history of pain except in the temporal region. It was relieved by a mastoidectomy.

Usually pain may be elicited by pressure over the mastoid antrum, tip or digastric fossa, but not always.

In mastoiditis, when pain is present, it is usually deep-seated, constant and not easily relieved by anodynes.

DISCHARGE.

The discharge may be *serous, muco-serous, purulent* or *muco-purulent* in character. If serous, the trouble is simple otitis media resulting from some throat or nasal trouble, as previously indicated. If neglected it may become sub-acute or chronic.

Purulent otitis media is always of bacterial origin and comes by the usual route, as named above. Staphylococcus, streptococcus, pneumococcus, influenza bacillus and mixed infection are given as causes. Atmospheric change, sudden chilling, nephritis, diabetis and so forth, may contribute, but germs are necessary. By irritation, produced by the presence of pus, the tube, tympanic cavity, drum membrane, antrum and mastoid cells become involved. The discharge may be thick or thin, purulent, muco-purulent or bloody.

The following complications may arise, and I will say that the complications are to be more dreaded than the primary lesion:

(1) Sloughing of mucous membrane and necrosis of bone.
(2) Destruction of drum membrane.
(3) Loss of one or both larger ossicles.
(4) Filling of cavity with granulating tissue or polypi.
(5) Extension of active process to attic, antrum and mastoid.
(6) Destruction of mastoid cells.
(7) Extension to brain or sinuses.
(8) Extension to labyrinth.

If mastoiditis is suspected, examine for bone debris. Trans-illuminate; disease obstructs passage of light through the mastoid.

Indications for mastoid operation following acute otitis media:

(1) Pain, continued behind the ear.
(2) Swelling behind the ear or in the neck.
(3) Swelling of the wall of the posterior, superior, internal portion of the external auditory meatus.
(4) Evidence of pus under skin or in the neck.
(5) Extension of active process to attic, antrum and mastoid.
(6) Destruction of mastoid cells.
(7) Indications of brain, sinus or labyrinthine complications.
(8) Continued suppuration.

Indications for mastoid operation following chronic purulent otitis media:

(1) Acute exacerbations of chronic otitis media.
(2) Continued pain in ear or side of head.
(3) Recurrence of pain associated with intermittent discharge.
(4) Sinus into mastoid, external or in meatus.
(5) Intractable discharge.
(6) Indications of brain, sinus or labyrinthine complications.
(7) Cholesteatoma.
(8) Evidence of necrosis in attic or antrum.

Contra-indications: When patient has symptoms of meningitis or pneumonia.

DEAFNESS.

For convenience and diagnostic purposes in reference to hearing we will divide the ear into two parts, namely, the *conducting* apparatus and the *perceiving* apparatus.

The conducting apparatus includes the external auditory canal, middle ear, and all its attributes external to the foot-plate of the stapes.

The perceiving apparatus includes the labyrinth, auditory nerve and brain cells.

So long as the defect is located in the conducting apparatus we can usually hold out some hope to our patient, but not so if in the perceiving apparatus.

In the former, partial deafness may be produced:

(1) By impaction in the external auditory canal.
(2) Pus, granulating tissue and so forth in the middle ear.
(3) Closure of Eustachian tube by thickened mucous membrane, adenoids, etc.
(4) Caries of the ossicles.

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(5) Destruction of drum membrane, etc.

If perforation is permanent, cholesteatoma is likely to supervene, diagnosed by epithelial casts in discharge.

If multiple perforation of drum, suspect tuberculosis.

If the labyrinth is defective it may be the result of pus constantly in the middle ear, the infection eating its way through the oval window, round window or through the bony plate.

The cochlea may also be the primary seat of the trouble.

TESTS.

Now, as an aid to the location of the defect in hearing, there are certain principles with reference to sound conduction and hearing we must understand and intelligently apply:

(1) In air conduction sound waves pass through the auditory canal and middle ear to the sound-perceiving apparatus.

(2) In bone conduction sound passes direct through the bone to the perceiving apparatus and not through the auditory canal and middle ear.

(3) For perfect air conduction there must be a patent canal, a normal middle ear and a perfect internal ear.

(4) For perfect bone conduction the perceiving apparatus must be perfect regardless of the canal or middle ear.

(5) Impairment of bone conduction may be caused by disease of canal, middle ear or sound-perceiving apparatus.

(6) Impairment of bone conduction is due to loss of function of the sound-perceiving apparatus.

(7) When the air-conducting apparatus is diseased, the bone conduction is increased.

(8) When the perceiving apparatus is diseased, both bone and air conducting is diminished.

(9) Under normal conditions bone conduction is about one-half that of air conduction.

(10) When the perceiving apparatus is diseased, as a rule, there is more loss for high than for low tones.

(11) When the conducting apparatus is diseased, as a rule, there is more loss for low than for high tones.

Therefore: Loss of air conduction without loss of bone conduction indicates a middle ear lesion, while loss of bone conduction indicates an internal ear lesion.

In applying the above principles the tuning forks are brought into use.

If we suspect otosclerosis, Gellé's test is of prime importance, also the detection of tone islands by the use of a wide range of forks or the Galton whistle.

Tone islands and a transparent drum membrane are almost pathognomonic of labyrinthine disease.

I consider the applications of these tests in cases of defective hearing and a record of same, made before instituting treatment, quite important, that you may know just the extent of improvement obtained by treatment.

A close observance to careful tests with a record of same is oftentimes extremely essential when made for applicants for public or corporation service, a record of which would be of great value in case of accident wherein the employee sues for damages, claiming his hearing was impaired as a result of the accident. By your record you may be able to verify or disprove his statement and relieve yourself of considerable embarrassment.

The Preparation of the Pregnant Woman for Labor.

By Thomas W. Musgrove, M.D.,
Sultan, Wash.

Motherhood is the culmination of woman's glory. The physiological, psychical and mechanical processes of pregnancy and labor are only eclipsed by the mental processes of the human brain in beauty of construction and manner of action.

When the grandeur of motherhood is fully comprehended and the complexity of the processes by which a new individual of the human race is propagated fairly well understood, the scientific physician realizes that he is standing on holy ground, when he attempts to conduct a woman through the dangers and difficulties of gestation and delivery. The conscientious obstetrician feels that he is entering into the *sanctum sanctorum* of the temple of human life, and all base desires are abashed into absolute abeyance.

To rightly prepare the pregnant woman for labor the obstetrician must first prepare himself, morally, intellectually and medically. The touch of the physician ought to be as pure as a sunbeam, both morally and surgically. Then he will approach the pregnant, or parturient, woman with reverence and awe, and she will be assured of

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the worthiness of her attendant and give him full confidence. To hold the confidence of a pure woman, there must not be a flippant word, a careless touch, an innuendo, a sneering remark, an indifferent attitude, or a thoughtless act on the part of the attendant.

A great French teacher of obstetrics was once asked by a student how he should treat a washerwoman in labor, and the reply was, to treat her just as he would the most refined duchess.

Now, what will the pregnant woman most likely require from her medical attendant? The experience of the past will aid us somewhat in deciding what to expect, but the present age is so much more strenuous for women than the past, that the up-to-date physician must recognize the influence of modern social conditions on the pathology of pregnancy. Before woman emancipated herself from the quiet life of the home and entered into the educational and politico-social arenas, she led a more natural life and was not so liable to derangements of health from pregnancy as she is now.

Consequently, many of the minor ills due to pregnancy have been exaggerated in mind, if not in fact, until we now have first of all a state of mental perturbation that in many cases becomes a menace to health and sometimes to sanity. "Who shall minister to a mind diseased?" is a most pertinent question in this connection.

With the higher education, more exacting social duties and the development of more of the artistic taste in regard to the form of body and dress, the modern woman frequently deliberately eschews pregnancy, and if by chance such an one does become pregnant, there is often a "state of mind" produced that will require the wisest and best treatment to restore to normal. Therefore, in listing the more prominent ills that pregnancy may produce, I place this first.

I. Opposition to the pregnancy and despondency.
II. Morning sickness.
III. Ptyalism.
IV. Anasarca.
V. Irritable bladder.
VI. Constipation.
VII. Pressure pains.
VIII. Threatened convulsions.

I. Opposition to the pregnancy and despondency.

When a wife comes to the conclusion that she is ill used by her husband for producing pregnancy and begins to bewail her fate with moans and threats of producing abortion or suicide and a physician is called to cure her, there will be a testing of his manhood and his skill to the utmost—and woe to the physician who falls down or fails to cure the case. Such cases are generally amenable to wise counsel and proper treatment. But the man who hears the tale of woe such a woman can tell, and then advises secret abortion, or fires a prescription at her for some sedative, is simply a monster, and wholly unfit for such important work.

First of all, he must wisely induce a state of mind by kindly instruction or, if need be, by hypnotism, that will bring the mother love for the embryo to the rescue, and assure her that she will be healthier and happier by permitting nature to take its course. Then regulate all the functions of the body by careful scientific treatment. Give her small doses of macrotys and pulsatilla, regulate her diet, her exercise, and amusements, and see to it that her work and environment are the best obtainable under her conditions. Have a heart to heart talk with her husband, and if he is not a sensualist or a fool, he will aid much in helping his wife to cheerfully bear the child she dreaded so much.

He must treat her kindly and refrain from marital pleasures as much as need be to satisfy his wife. Too much man during pregnancy has disgusted many a good woman. While some women enjoy marital pleasures much more during pregnancy than before, for they say the damage is done and there is nothing more to dread, each case must be treated on its merits.

Having allayed her fears and overcome her disgust, the other distressing and pathological conditions may be treated with the assurance of success.

The following case will illustrate my remarks:

About two years ago a woman came to me and stated that she had had two children, both of whom were delivered with forceps, and her perineum and rectum were torn so badly with the second birth that she had had an operation some time after to restore the sphincter ani and perineum to something like normal; that she was three months pregnant and was so alarmed that she must be relieved of the pregnancy forthwith. I got her history, and having examined her thoroughly, I told her there was no reason why she could not carry her child to term and be delivered easily. As she had much confidence in me, she consented to permit me to direct her through her gestation and labor. I put her on macrotys and pulsatilla at once, and in a month she was comfortable in mind and body, went on to full term and I delivered her under small doses of chloroform, without forceps and with a

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very small tear. She recovered rapidly and her baby is now the pride of her parents.

I consider such a result worth more than a thousand abortions that would pay from twenty-five to one hundred dollars each.

II. Morning sickness.

Morning sickness is a more or less distressing complaint, but most cases can be relieved, and soon reduced to a minimum by the third month of pregnancy and, soon after, eliminated. The few malignant cases that are met with will try both patient and doctor to the utmost. Nevertheless, nearly all can be cured without resorting to abortion. In ordinary cases, the regulation of the bowels by laxatives, after first giving calomel and bicarbonate of soda to effect, followed by a saline. Give the calomel in small doses every hour till a grain or two are taken. Then give oxalate of cerium and ingluvin, in five-grain doses of each, three or four times a day. In the worst cases, feed per rectum and rest the stomach. Ipecac gr. 1-10 every hour for ten hours will often do much good. A few cases will prove obstinate and require more elaborate treatment. The os uteri in such will often be found hard and contracted, spasmodically. A moderate dilation of the external os and the application of a suppository of ol. theobroma and extract of hyoscyamus to the os will often do much good. About two grains of the extract once or twice a day for a few days will work well. The regulation of food, bowels and coition will complete the cure in almost every case. Only in the diseased neurasthenics will the destruction of the fetus be required, but no doctor should ever do such an operation without the sanction and assistance of another practician, both for his own and the woman's safety.

III. Ptyalism.

This is sometimes very troublesome, but not dangerous. Tincture of myrrh, glycerin and water for a mouth wash will help some, but belladonna, pulsatilla or phytolacca will give good results. Tincture of myrrh in five-drop doses will often cure ptyalism, as well as nursing sore mouth. All these remedies should be given after the manner of eclectics, *i. e.*, in small and often repeated doses.

IV. Anasarca.

This is a more serious trouble than any yet named. It depends upon a general condition of blood dyscrasia and imperfect circulation of the blood. The return of the blood to the heart is impeded by pressure on the veins in the pelvis, and the kidneys fail to eliminate fully the excretions; consequently, there is exudation of serum into the cellular tissue, which threatens health and in some cases life itself. Such cases require the most careful study and treatment. If albumin is found in the urine, arbutin and tincture of iron are indicated. If dropsy of the abdomen comes on, apocynin is required and cactin or digitalis; salines for the bowels and occasionally a few doses of pilocarpin till sweating is free for an hour or two.

V. Irritable bladder.

This trouble is generally entirely relieved by benzoate of sodium, belladonna and uva ursi.

VI. Constipation.

This condition requires the most careful treatment; over purgation is harmful. I have found the anti-constipation granules of the alkaloids to be the best medicine for general use. Small doses, repeated to effect. Occasionally 1-10 grain of calomel, or podophyllin, or both combined, every hour for ten hours, followed by a saline, will act nicely. Cascara aromatic is an excellent laxative.

VII. Pressure pains.

As the term of pregnancy nears its close there are frequently pains of an erratic character, that are sometimes called rheumatic, but there is never any real rheumatism about them. They are, nearly always, simply pressure pains, and may be greatly relieved by removing the waistbands of her clothes entirely and supporting her skirts from her shoulders. An abdominal supporter to take part of the weight off the abdominal muscles will give much comfort. Give macrotys and hyposcyamus in small doses, frequently repeated, and there will soon come a feeling of comfort that will make the woman very grateful for the treatment.

The black cohosh is assuredly a *partus preparator,* if given properly before labor begins, but do not give it during labor, as it relaxes the uterus and in some women would induce a hemorrhage after delivery. This remedy has given me more satisfaction and my patients more comfort during the last month or two of pregnancy than any other drug I have used, and I have used not a few.

VIII. Threatened convulsions.

When a pregnant woman has swelling of the feet, scanty urine, a blinding headache

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and a pain in her stomach, look out for convulsions. There may be albumin in her urine or there may not be. The exact cause of puerperal convulsions is not yet proven so surely as to be accepted by all. The fact may be, that there is more than one etiological factor in its production. Pressure upon the ureters and kidneys seems to be one of the chief factors in preventing the proper excretion of the urinary solids. Consequently, any woman who has a small pelvis and a highly nervous temperament is most likely to have eclampsia.

Free catharsis, diuresis and diaphoresis, produced by mild means, and rest in bed often prevent their occurrence. Epsom salts, bitartrate of potash and uva ursi will often work wonders, especially if veratrum viride be given in small doses, often repeated, when the pulse is rapid and high. Veratrum acts as a prophylactic as well as a specific for eclampsia. Given according to Ellingwood's directions in his "Materia Medica," most cases can be prevented or cured if it occurs.

Having conducted the pregnant woman through her gestation on the lines indicated above, you will find labor easier, safer and shorter than if she is left to the tender mercies of ignorant friends and nature unassisted.

What is the Wassermann Reaction?

By Mary C. Conant,
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In brief, the Wassermann reaction is the laboratory method employed to determine, by examination of his blood, whether or not the patient has syphilis. In a high percentage of cases this test will reveal the presence of syphilis, not only in recent infections, but also in congenital and chronic cases. The importance of a reliable method of diagnosis of a disease of such confusing symptoms as syphilis cannot be overestimated.

The reaction is based upon Ehrlich's side-chain-theory, the Bordet-Gengou phenomenon of complement fixation, and the fundamental principles of immunity.

The principle of the Wassermann reaction has to be clearly understood and constantly kept in mind. Briefly stated, it is this: "The Wassermann reaction depends upon the fact that the blood serum of syphilitic patients contains a substance, which, in the presence of lipoids, is capable of taking up complement in such quantity that, upon the subsequent addition of red blood corpuscles and their corresponding hemolytic amboceptor, hemolysis does not occur at all or is more or less impeded."[1]

The five factors which enter into the reaction are as follows: Antigen, antibody, complement, sheep corpuscles, and hemolytic amboceptor.

An antigen is any foreign substance which, when introduced into the blood channels, peritoneal cavity, or subcutaneous tissues of an animal, produces a reaction in the blood serum with the formation of antibodies. Many bacteria, toxins, foreign cells (particularly red blood corpuscles), albumins and ferments, when thus injected, tend toward the formation of a specific antibody. Thus, under the general term "antibody" are included bacteriolytic amboceptors, antitoxins, cytolysins, hemolytic amboceptors, precipitins and antiferments.

In all blood serum there is a substance called complement, which is an essential factor, both for the formation of antibodies within the body and for the proof of their existence in the tests conducted outside. While present in any blood serum, it is of more uniform strength and more readily obtained from the guinea pig than from other sources. Because of this fact the guinea pig has come to be a necessity for the Wassermann reaction. Now, whenever an antigen is brought together with the serum containing its homologous antibody in the presence of complement, these three things unite, *i. e.*, the complement becomes fixed or anchored to the other two. This is according to Ehrlich's side-chain-theory, and it is often spoken of as the principle of complement fixation. While known to take place, this is often an invisible reaction. Complement is not specific, but may react with several different systems. Complement is rendered inactive by heating the blood serum to 56° C. for half an hour.

The hemolytic amboceptor may be obtained by immunizing a rabbit against sheep corpuscles. Usually about 50 c.c. of corpuscles (a 100 c.c. full blood volume) injected in divided and increasing amounts, at five-day intervals, will produce a good amboceptor. Ten days after the last injection the blood of the rabbit is collected, centrifugalized, and the serum pipetted off into capsules, sealed and inactivated at 56° C. for one-half hour. A good amboceptor once obtained may be kept in sealed capsules for weeks and months.

That the rabbit serum has acquired the power of rapidly destroying sheep corpus-

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cles may be demonstrated as follows: If fresh washed sheep corpuscles, this hemolytic amboceptor and complement are combined in the proper proportions and kept at 37° C. for a half hour, hemolysis takes place, *i. e.*, the sheep corpuscles are all destroyed, the color in the tube changes from a cloudy yellowish red to a clear bright red. This constitutes the hemolytic system and is an example of a visible complement fixation.

Bordet and Gengou,[2] in order to demonstrate an invisible complement fixation, took an extract of typhoid bacilli (antigen) and some of the serum from a typhoid patient (antibody) and guinea pig serum (complement) and combined them. After allowing time for the fixation of the complement, they then added some fresh sheep corpuscles (antigen) and some anti-sheep amboceptor from an immunized rabbit, but no more complement. There could be no reaction between the corpuscles and amboceptor without complement, but as the first complement was already bound to the typhoid antigen and antibody, we see why there could be *no hemolysis*. But if as a control they used typhoid extract, normal serum, and complement, and then added corpuscles and amboceptor, hemolysis occurred promptly. This was because there were no typhoid antibodies in the normal serum to unite the typhoid extract and complement.

Amboceptor has two combining groups: one for its homologous antibody, and one for complement.[3] Thus these tests are somewhat like equations in algebra; if there are a sufficient number of known quantities, the character of an unknown can be determined.

Wassermann was the first to apply these tests to the demonstration of syphilis. Not having a pure culture of Spirochete pallida, he used as antigen an aqueous extract of liver from a congenital syphilitic fetus. Later alcoholic extracts were used, and now it has been proved that substances rich in lipoids make a good antigen. Just how the Spirochete pallida effects the metabolism of the body that this should be true, I do not know. Doubtless, some other diseases produce a similar effect and thus explain the occurrence of a positive Wassermann, as in scarlet fever during part of its course. Yet the fact remains that in syphilitic serum there is some substance which reacts with the lipoids and fixes complement, and this substance is not present, or not in sufficient quantity, in normal serum.

If we have at hand properly prepared and suitable syphilitic antigen of known strength, serum from a patient to be examined, guinea pig complement, fresh sheep corpuscles, and an anti-sheep amboceptor, we are ready for the test itself. Every test has at least one control.

Into the "A" test tube is placed the same quantity of the solutions of antigen, patient's serum, and complement, while into the "B" tube (the control tube) is put the patient's serum and complement with enough salt solution added to make an equal volume. (Notice, that antigen is absent in the "B" tube and, therefore, there is nothing to fix the complement; that is, the series in the "B" tube is not homologous.) Both tubes are placed in a water bath one-half hour at 37° C. Then all tubes receive the same quantity of sheep corpuscles and amboceptor and are returned to the water bath. In a short time hemolysis begins in the "B" tube and when distinct the tubes are removed and centrifugalized at once, or put on ice. If the patient's serum was syphilitic there will be no hemolysis in the "A" tube and, after centrifugalization, all the sheep corpuscles will be in the bottom of the tube and the supernatant fluid will be clear, pale, not even tinged with pink. This entire absence of hemolysis constitutes an absolutely positive test usually spoken of as a "triple plus reaction."

A Wasserman reaction is reported as follows:

1. +++ = no hemolysis; all corpuscles in bottom of tube.
2. ++ = barely a trace of hemolysis.
3. + = fair amount of hemolysis.
4. +— = few red cells left.
5. —+ = very few cells.
6. — = complete hemolysis-like control.

In diagnosis, only the first two are reported as positive, but the partial reactions are very important, when, for instance, one is following a case treated with "606" and can see triple plus, after a few weeks, become a double plus, and then pass on down to the absolutely negative reaction.

In the interpretation of the partial reactions all the experience, knowledge and judgment of the pathologist are required and, for this reason, he should have a full history of every case, including the symptoms, whether or not mercury or "606" have been used recently, and if other diseases are

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present. It is no small responsibility to pronounce a person syphilitic, and no conscientious pathologist will do so on a partial reaction. The pathologist and physician must work together if the best results are to be obtained. Repeated examinations are often necessary.

The non-syphilitic diseases which sometimes give a positive Wassermann reaction are not liable to be confused with syphilis, as, for example, occasional cases of scarlet fever, cancer, and tuberculosis. In view of the high percentage of positive reactions in undoubted cases of syphilis, it does not seem necessary to dwell upon those comparatively few non-syphilitic diseases in which a positive reaction is sometimes obtained. With further work it is quite possible that these will be better understood, or a technique developed by which the error (if it exists) may be detected.

The field of usefulness and practical application for the Wassermann test is constantly increasing. First, its value may be mentioned in clearing up the diagnosis of obscure, doubtful, and masked cases of syphilis. Perhaps next in importance should be mentioned the assurance of a cure in cases treated with "606." In this connection might also be included the answer to the question of allowing marriage.

There is going to be a wonderful work done by this test among the insane. Already it is found in general paralysis of the insane 80 to 100 per cent. give a positive reaction; tabes gives 40 to 80 per cent. positive.[4] In other mental conditions there is a varying percentage. It is a well-known fact that syphilis is one of the three leading causes of insanity. If on admission to a hospital for the insane, every acute case was given a Wassermann test, followed by treatment with "606" when positive, great benefit would result. By this means syphilis as an etiological factor could be determined at once. By immediate treatment some cases might be cured and others benefited, so that we might hope to see a lessening of that terminal dementia toward which all insanity tends.

The more familiar physicians become with the Wassermann test the more use they find for it in their daily diagnosis. It should not be overlooked that a negative Wassermann affords comfort to many patients as well as satisfaction to their physicians.

By this brief article I hope that the principle of the Wassermann test is made clear and that your interest in its use, reliability, and importance has been increased.

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The General Principles of Surgery, From the Standpoint of Internal Medicine.

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PRINCIPLE No. 1. In any operation which is intrinsically, or for special reasons, serious, the patient himself should be under the charge of a thoroughly competent physician of responsibility and authority, cognate with the surgeon.

PRINCIPLE No. 2. Barring emergencies, no operation, in which a viscus is involved, should be subjected to operation without careful diagnostic and prognostic consideration by an internist, or by a neurologist, ophthalmologist, laryngologist, or other appropriate specialist.

The spirit of these two principles is not fulfilled by the assistance of students, nurses, internes, anesthetists, guests at clinics, nor even of the previous attendant unless the latter feels himself competent to weigh, jointly and equally with the surgeon, the various indications present. These principles may be criticized as placing the surgeon in the light of a mere operator, but no lack of appreciation of the surgeon's skill and erudition is intended. It is obvious that the surgeon, while actually engrossed in the details of a major operation, cannot devote proper attention to the patient himself. It should be equally obvious that diagnostic skill, familiarity with physiology and physiologic pathology, expected of the internist, neurologist, etc., and acquired only by protracted study, research, daily application of various chemic and physical methods, etc., cannot ordinarily be acquired by the surgeon, incidentally, since the latter is occupied in analogous but different lines of study and practice requiring equally arduous labor, research and reading.

PRINCIPLE No. 3. From the standpoint

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of the internist, operations on the viscera or within the body wall, may be divided as follows:

1. Exploratory.
2. Sacrificial.
3. Evacuant.
4. Restorative, with regard to Position and Relations.
5. Restorative, with regard to Patency.
6. Preventive or Reparative of Rupture.
7. Providing Physiologic Rest—Short-circuiting.

Exploratory Operations.

PRINCIPLE No. 4. Exploratory operations should never be entirely so. While every section reveals some details not previously known or even knowable, no operation should be performed without as thorough preliminary diagnosis as possible, with due allowance for emergencies. Legal consent should be secured and surgical appliances should be in readiness to pursue whatever radical or palliative indications are developed by the exploration. When the condition proves to be so hopeless that no further operation is indicated, it should be recognized either that the diagnostic examination has been improperly made or that an inevitable limit of human skill has been encountered.

PRINCIPLE No. 5. While hurry in operating is to be deprecated, and while mere manual dexterity is a minor surgical accomplishment, the reduction of the period of anesthetic intoxication and of the handling of viscera (particularly of peritoneal surfaces) to a minimum is of the utmost importance, and a careful preoperative diagnosis is of the greatest value in attaining these ends.

PRINCIPLE No. 6. In all cases the term diagnosis should include not merely a naming of the anatomic lesion, but a definite conception of its extent, exact nature and complications, as well as an understanding of the functional capacity of the vital organs and of the general metabolism.

Sacrificial Operations.

PRINCIPLE No. 7. A sacrificial operation requires that the organ in question is not necessary to life and that the lesion is incurable.

PRINCIPLE No. 8. An operation that necessarily results in death or even in great disability (for instance, the sacrifice of the eye, limbs, etc.) is not justifiable even in the presence of a fatal disease, unless *(a)* the expected duration of life can be appreciably lengthened, or *(b)* the right to produce euthanasia or punitive maiming, for instance by preventing procreation, is admitted.

For example, the removal of the spleen, thyroid, suprarenals, one of two moderately diseased or senile kidneys, of, say, half of the small intestine, or of much more than half the pancreas, or a considerable amount of liver, or of the whole stomach, is probably fatal in the sense of shortening life, but the effect of the deprivation is so slight and gradual that it is justifiable in cases of any serious disease of comparatively short duration of life. On the other hand, in practically complete necrosis of the small intestine from mesenteric embolism or thrombosis, in fatal disease of an impaired kidney, in cancer of the pancreas or liver, radical operation would scarcely be justified even if the chances were that a slight prolongation of life would be secured.

The right to terminate life except in war, self-defense, or judicially, is ordinarily denied, and it should be clearly recognized that this opinion is essentially religious and not merely sociologic or ethical. How far the surgeon should constitute himself an arm of the law in mutilating human beings, even to prevent undesirable procreation, is doubtful. However, great risk of life is justified if there is an appreciable hope of cure or relief of a condition of terrible suffering or mental defect, as in microcrania, etc.; and in loathsome conditions.

PRINCIPLE No. 9. The chief disease demanding sacrificial operations, with the provisos as to the dispensability of the organ mentioned, are as follows:

(a) Cancer, sarcoma, malignant lymphoma and other essentially malignant neoplasms;

(b) Less absolutely, tumors in general, with due regard to their tendency to become malignant, to produce death adventitiously, and to their size, inconvenience and to the ease or danger of removal.

(c) Foci of infection not amenable to ether treatment, especially if tending to a fatal issue, and not so numerous as to be beyond the possibility of removal. For instance, acinomycosis and echinococcus disease almost absolutely demand extirpation, if possible. Localized tuberculosis usually demands operation. Syphilitic lesions, unless occasionally in the brain or other vital spot, practically never. Leprous lesions, usually not. Generally diffused infectious

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foci, of whatever kind, cannot be eradicated, though it may be worth while to attack certain large or superficial foci.

(*d*) Hopelessly strictured, ulcerated or degenerated organs or parts of organs, as certain appendixes, gastric and intestinal ulcers, pyonephrotic kidneys, badly diseased ovaries, gall bladders packed with calculi, prolapsed uteri, senile prostates, etc., often require extirpation.

(*e*) Sacrificial or occlusive operations to prevent pregnancy may be required in the interest of females and, possibly, in either sex, to prevent undesirable procreation.

Evacuant Operations.

PRINCIPLE No. 10. Collections of pus usually demand evacuation, except, as implied above, in pyemia. However, certain degrees of success in preventing or causing the resorption of sterilized pus, by radiant forces, chemic antiseptics, serums, etc., render it not impossible that non-surgical means of combating sepsis, as of other germ diseases, may ultimately be achieved. (See *Principles of Vaccine Therapy*, A. E. Wright, *Jour. A. M. A.*, August 10, 1907.)

PRINCIPLE No. 11. The formation of protective adhesions under the stimulus of septic inflammation is not sufficiently certain to justify delay of evacuation or extirpation. The policy, after pyogenic processes have reached a certain stage, of delaying operation until a well-defined abscess is formed, is of doubtful propriety. This applies especially to surgical dicta with regard to time of operating on the appendix.

PRINCIPLE No. 12. The use of blind puncture through tissues, notably peritoneum, susceptible to septic inflammation, should be unqualifiedly condemned, though the use of the exploring needle with proper exposure of the area under suspicion and with due protection of vulnerable tissues, is allowable.

PRINCIPLE No. 13. The evacuation of sterile exudates and transudates, in the absence of marked mechanic interference with respiration and circulation, including the danger of pressure necrosis, should not be undertaken (*a*) if the fluid does no particular harm, as by toxic contents, or (*b*) if resorption can reasonably be expected under medical treatment, as by counterirritation, diuresis, catharsis, etc., or (*c*) if fresh accumulation is to be expected.

PRINCIPLE No. 14. Foreign bodies and calculi should not be removed surgically, if evacuation by natural passages can reasonably be expected. Excepting very long or sharp-pointed implements, anything that can be swallowed can usually be passed safely through the bowel. Some allowance can be made for the dilatability of any passage. The passage of the fetus is ample justification, by analogy, for the passage of a calculus somewhat larger than the minimum calibre of a duct. The solution of metallic and saline foreign bodies and the disintegration of certain intestinal concrements and even renal and biliary calculi is possible, though by no means invariably successful. Even if the calculi cannot be dissolved—and large, firm ones certainly cannot—relative sterility of the urinary and biliary passages just as certainly can be secured by medication, and such treatment should always precede an operation, unless in an emergency. It is better to be alive with quiescent biliary or renal calculi than to be dead from shock, anesthetic intoxication, hemorrhage, or sepsis, after an operation, and the operation on the biliary organs is more than ordinarily dangerous. The state of the liver, in biliary lithiasis, should always be carefully investigated, and, if the intrahepatic ducts are probably filled with calculi, an operation on accessible calculi should be considered with hesitancy. (Calculi producing complete occlusion will be mentioned subsequently.)

Restorative Operations, with Regard to Position and Relations.

PRINCIPLE No. 15. The various pexies and other operations to restore organs to their normal position and relations should be carefully weighed in the balance for the following reasons:

(*a*) The immediate mechanic factor, removable by operation, is not necessarily of prime importance. There is no particular reason why the function of an organ should depend upon its following an anatomic custom. This is notoriously the case with removable kidney, which is mainly a developmental defect. Often a kidney artificially fixed where we would expect to find a kidney in a normal individual, is placed at a further mechanic disadvantage.

(*b*) The malposition often tends to recur by relaxation of supports, especially in the case of the kidney.

(*c*) In the various abdominal ptoses, restoration of the integrity of the abdominal wall, by closing large hernial openings, including that due to diastasis of the recti, or of its tone by attention to diet, alimen-

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tary fermentation, clothing, exercise, etc., or the use of external supports, are usually simpler, safer and practically better substitutes for so-called radical operation.

(*d*) Errors in diagnosis based on superficial examination are frequent. Pot-belly does not necessarily imply enteroptosis. Atonic dilatation, that is sagging of the greater curvature of the stomach, is often mistaken for true gastroptosis. A Riedel's hepatic lobe or other mass may be mistaken for nephroptosis. Sometimes, the diagnosis seems to rest on pure guesswork, as in a case in which a surgeon stitched a pair of neuralgic kidneys and, on the inevitable return of pain, concluded that they had worked loose again, whereas they were just as firmly fixed as ever.

(*e*) Operations, especially to suspend the stomach or liver, are difficult and dangerous.

(*f*) Laceration of an organ, especially when excretory tubules, as in the kidney and liver, are punctured, tends to produce foci of disease. Thus, the urine after nephropexy, may contain blood and, permanently or intermittently, albumin and casts.

Operations Restorative of Patency.

PRINCIPLE No. 16. The patency of any tube is necessary at least to local health, and, if the tube is of appreciable size or conducts a permanent current, to life itself. However, all minute blood vessels and most macroscopic vessels, except those near the heart and some few others, as the femoral and long saphenous veins, may be closed with impunity. The only other macroscopic tubes that may be closed with impunity are the Eustachian canal, the salivary ducts and those leading from the reproductive glands. Obvious local interferences occur even in the case of these.

PRINCIPLE No. 17. The current of a strictly secretory or nutritive tube must not be diverted from its proper destination. Excretory currents may be diverted in any way, so long as they have a free discharge. For practical purposes, the bile and the contents of the intestine after most of the small intestine has been drained by lacteals and blood vessels, may be considered excretory. The incidental effects of such drainage may cause not only inconvenience but serious secondary conditions. It may be noted that, of the various digestive juices, only pancreatic, or, strictly speaking, pancreatic juice with its tryptic ferment activated by an intestinal ferment, has any marked digestive action on tissues.

PRINCIPLE No. 18. Acute strangulation or obstruction of a tube, excepting the large blood vessels and respiratory passages, is immediately dangerous on account of necrosis and secondary sepsis, especially from perforation into the peritoneum; in other words, it is the incidental occlusion of blood vessels and not the gross occlusion of the lumen of the tube that is the immediate surgical condition. Complete urinary obstruction may exist for a week or more, biliary for probably longer, the pylorus may be water-tight for several weeks and coprostasis for one to several months, before causing death.

PRINCIPLE No. 19. Obstruction of an accessible tube, by contents, is always theoretically amenable to extraction or propulsion, and, under certain conditions, the contents of an inaccessible tube are amenable to solution or disintegration.

Obstruction of the circulatory tubes is, practically, not amenable to any treatment (although end-to-end suture of large, healthy vessels is practicable) and either produces local or somatic death if supplementary channels are not available, or else may be disregarded. Respiratory obstruction, above the bifurcation of the trachea, requires section below the obstruction, without delay to secure anesthesia or asepsis, unless instantaneous expulsion with the subject inverted, is possible. In the case of the alimentary canal, the sources of danger are pressure or strangulation necrosis, with subsequent sepsis due to perforation, and shock. Usually, 24 hours' delay may be allowed and stimulation of peristalsis and mechanic lavage may be practiced with due regard to the strength of the patient and that of the bowel. If the obstruction is feces or some similar soluble or disintegrable substance, a longer time may be allowed, but the chief route of attack should be from below. In the biliary and urinary tracts, an acutely obstructing, contained body, is not amenable to solution or disintegration except by crushing. The female generative tract is practically always amenable to relief by crushing or cutting of the contents—usually a fetus—if extraction without demolition is not possible. The 24-hour limit applies to all of these. The esophagus and lower fourteen inches of the bowel are amenable to internal instrumentation on the same principles.

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PRINCIPLE No. 20. Absolute, or nearly absolute, obstruction of any tube, especially the intestine, by intussusception, volvulus, external pressure, etc., involving the wall, and threatening its vitality, demands operation within the 24-hour limit and, indeed, a very brief and moderate application of any kind of mechanic treatment is all that is justifiable and can be thoroughly tested within a few hours, when no further delay should usually be allowed.

PRINCIPLE No. 21. Absolute or incomplete obstruction of a tube by disease of the wall itself (not by contents or by factors compressing the wall) is not emergent. The following choice of methods is presented:

(*a*) Dilatation.

(*b*) Establishment of a short circuit.

(*c*) Reduction of the consistence and amount of the contained substance and general support of the patient, while slowly dying.

(*d*) Radical removal of the lesion and suture so as to renew the patency of the tube.

While the last is the ideal method, the appropriate method varies according to the structure involved and the histologic nature of the lesion. Non-malignant strictures, wherever accessible, should usually be dilated or cut, or both. In deep, non-dilatable, esophageal strictures, short-circuiting by gastrostomy is preferable. Malignant obstructions should either be radically removed or else should be let alone so far as possible, but should not be irritated by stretching or cutting, unless the conditions are unusual.

PRINCIPLE No. 22. Short-circuiting operations consist in establishing an afferent opening below a proximal obstruction—tracheotomy, gastrostomy and superior enterostomy are practically the only ones, or an efferent opening above a distal obstruction—as preternatural anus, transplantation of ureters, etc., and contain artificial biliary fistulæ, or of a passage by anastomosis, around an internal obstruction—chiefly limited to the alimentary canal and the spontaneous restoration of circulation around an occluded vessel. All short-circuiting operations are Hobson's choice. In all, attention should be paid not only to the establishment of a passage, but to securing physiologic rest of the affected area. In gastric cancer, superior enterostomy is far superior to gastro-enterostomy. In non-malignant lesions, the rest may result in cure. Short-circuiting of the portal circulation in hepatic sclerosis is logical to diminish the risk of internal hemorrhage and ascites; illogical from the standpoint of physiologic chemistry, and, practically, is still *sub judice*.

Operations Prophylactic Reparatory of Rupture.

PRINCIPLE No. 23. Operations for concealed hemorrhage are, essentially, operations directed against a rupture. Traumatic hemorrhages sufficient to cause symptoms of exsanguination, usually demand operation, in spite of the condition of the patient, who cannot usually be stimulated without increasing the hemorrhage. Pathologic ruptures of vessels, as in gastric and duodenal ulcer, including ulcerating cancer, do not, as a rule, require operation simply to restrain hemorrhage, in spite of surgical teaching to the contrary. In other words, if the patient survives long enough for operation, the hemorrhage can usually be checked by medical means. However, hemorrhage into any serous cavity usually requires ligation, both because spontaneous contraction is not likely to occur and in accordance with the general principles for preventing sepsis.

PRINCIPLE No. 24. Prophylactic operations, including those in which the immediate lesion is of minor importance as compared with the possible or probable secondary condition, require a careful balancing of the immediate and remote risk and the accessibility of the surgeon in the event of the anticipated catastrophe. For instance, tight phimosis usually demands prophylactic operation, not so much because of the actual danger of the various possible effects as because the operation itself is so simple and safe. Hernia, in a young, active and otherwise healthy adult, should usually be submitted to radical operation as a prophylactic of possible strangulation or even for cosmetic reasons. In a feeble, elderly person, it is better not to cry till the stick comes. The necessity of the interval operation in scolecitis (appendicitis) is greatly exaggerated by most surgeons. In the first place, recurrences are less and less severe, and more and more subject to protection by thickening and adhesions; in the second place, thorough dietetic and medicinal treatment, which is too much neglected, can cure all but the worst cases. But the indications for an interval operation are obviously very different for the city resident within easy reach of a number of compe-

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tent operators and for a resident of a remote country district, or a traveler.

PRINCIPLE No. 25. Abdominal operations for emergent conditions should always be supplemented by a search for indications for prophylactic operations, unless the condition of the patient prevents. For example, a Cesarian section should always be extended so as to prevent subsequent pregnancy, and, in operations of the adnexa, all suspicious tissue should be removed, unless the indication to preserve the power of procreation is urgent. If the appendix is found to be diseased or so situated as to render subsequent inflammation especially dangerous, it should be excised. Indeed, under favorable conditions, the patient should be given the opportunity of having a perfectly normal appendix removed. Internal bands should be severed and, in elderly persons or those presenting indications of biliary disease, the gall bladder should at least be palpated.

PRINCIPLE No. 26. When operations on the viscera are contemplated, the common sense rule should be followed of hitting the nail on the head. To operate on general principles in the sense of no principle at all, for instance swinging the ileum over to the sigmoid, in a case of senile failure of digestion and general health, is folly, and not to be excused on the ground that medical treatment had failed and that the surgeon should be given a chance. The only operation which rests on empiricism and which serves as an excuse for hit-and-miss surgery, is opening the peritoneum for tuberculosis. Gastro-enterostomy for gastric ulcers does not hit the nail on the head, although justifiable if extirpation of the ulcer is impossible and if actual stagnation really exists. It also leads to the formation of duodenal ulcers and, obviously, cannot prevent the occurrence of further gastric ulcerations due to unrelieved predisposing causes. Its empiric justification is, perhaps, to be explained by the fact that some operators make the diagnosis of gastric ulcer with a frequence out of proportion to the incidence of gastric ulcer in internal medical practice or even in the experience of the post-mortem room. Rest in bed and suggestion are quite adequate to cure a vague dyspepsia operated for under the name of ulcer.

PRINCIPLE No. 27. Operation, in and of itself, cannot cure a lesion or restore the general health. In many instances, the removal of a focus of disease is sufficient; in many others, it is not. For instance, even the surgically successful fixing of a movable kidney does not remove developmental conditions or the nervous state commonly associated. Removal of an appendix which is involved simply as a part of a general typhlitis or colitis, logically is followed by a return of identical symptoms.

PRINCIPLE No. 28. In any case, statistics should be subordinated to individual indications. For instance, ether mortality is about ten times that of chloroform; but many cases of kidney, lung, brain and liver lesion, run less risk with the latter. So, too, while any considerable series of gastric cancer cases will show a greater average prolongation of life with gastro-enterostomy than with attempts at radical removal, the former operation is merely palliative and unnecessary even when there is ischochymia, since debris can be removed by lavage and nutrition maintained partly by the stomach and partly by enemata, nearly as long as by a successful gastro-enterostomy. There is not usually an indication to prolong life in cancer, rather should any risk be taken to secure the possible chance of a cure. It is entirely inexcusable to refuse to operate in a case in which operation affords the only hope, simply to keep one's statistics favorable, or even with the intention declared by some, of teaching the general practitioner and the laity to seek early intervention.

PRINCIPLE No. 29. In any case, the medical and surgical risks should be jointly considered. The risk from anesthetic alone is about 1 :2,500 for chloroform, 1 :23,000 for ether, and the total vivisectional risk about 1 per cent. for fairly favorable cases subjected to capital operation on the viscera. The danger of hernia after abdominal section is about 1½ per cent. Intestinal adhesions occur after most abdominal sections, and are doubtless a source of danger, although, in many instances, even more likely to occur without operation. The vicious cycle after gastro-enterostomy and the development of duodenal ulcers are decided drawbacks to this operation. On the other hand, the medical mortality should also be considered, with due regard to the difference between mild and severe cases of the same name.

PRINCIPLE No. 30. The physician who delays or denies surgical consideration of a doubtful case, and the surgeon who es-

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says a non-emergent operation on a viscus without securing expert medical counsel as to diagnosis, prognosis and treatment, are equally culpable. So, too, the modern tendency to shirk responsibility by performing serious operations indiscriminately is quite as reprehensible as the older method of abandoning patients to morphine and Providence. For either physician or surgeon to deny the patient the benefits of the other's skill, excusing himself by individual errors or limitations of human wisdom, shows a selfish and conceited spirit which has no place among broad-minded professional men.

The New is Often the Old in Another Form.

EDITOR MEDICAL COUNCIL:

We out West enjoy reading THE MEDICAL COUNCIL very much, and you may be interested in hearing that a little girl, recently told her mother she did not like going out riding with the Doctor when he had a copy of your valuable journal in the carriage with him!

We are reminded of a professional intellectual duel we once witnessed here between our preceptors, Dr. Richard Keyte Lewis, an allopathic giant of his day and a graduate of both the Louisville Medical School in Kentucky and old Jeff. of Philadelphia, and Dr. Thomas Jefferson Smith, an eclectic giant. Both stood six feet two inches, and both were up to date and astute, expert men in medicine and surgery here in 1858, and the best of friends.

Dr. Smith said to Dr. Lewis, one day in a crowd, "Doctor, why will you persist in using metals, such as mercury, arsenic, and silver in your practice; you know they are dangerous and kill many patients?"

"Yes!" said Dr. Lewis, "why do you use an ax, a razor, or a scalpel? You know they are dangerous weapons unless in the hands of an experienced workman."

Dr. Smith rarely ever lost a case of typhoid fever; he began to use antiseptics as soon as the diagnosis was made, and it was the privilege of the writer to treat Dr. Smith's youngest boy with calomel, when he had Asiatic cholera here in 1873. In 1849 we saw him put to sleep pigs, ducks, snakes, cats and dogs with chloroform and ether, and we witnessed him restore suspended respiration with electricity, and yet he did not claim to have discovered these agents. Dr. Lewis made us perform our experiments on living animals. Great men are always willing to learn and be taught; and are always students at the fountain of true knowledge. They have common sense in an uncommon degree, and they always hunt the cause of the lesion, and aim to remove it.

It is not right for the Bone to say to the Body, "Because I am not a Nerve I am no part of the Body;" or the Adjective to say to the Verb, "I am no part of speech because I am not a Noun." Butler taught eight parts of speech to constitute the English language; and it requires anatomy, physiology (comparative as well as general), chemistry, triology, pathology, bacteriology, psychology, pneumatics, therapeutics, and a host of other things, with competent clinical bedside knowledge to constitute a thoroughbred physician. It embraces all other systems in one body. It does not run off with the bone, like the osteopaths, and say I cure all things by adjusting a misplaced bone, or cure disease by adjusting a displaced member; but the true physicians adjust themselves to find out the cause, and then remove it by any means in their power. The thoroughbred does not say, like the massagist, I cure all aches and pains by massage, but like Dr. S. Weir Mitchell, from whom we learned all these things half a century ago, and it is amusing to see doctors using as new what we saw practiced in the hospitals in the East and West fifty years ago. Dr. Samuel D. Cross was right when he asserted that we have no right to call lesions after the name of any doctor, such as Graves's disease for exophthalmic goitre, or Chopart, Pirogoff, or Teale for their well-known operations. These men made operations known that were used long before their day and generation. There is nothing new under the sun, and arsenic was used long before Ehrlich made arsenic in its present dress of "606"—so well known.

C. WALKER WATTS, M.D.,
Pres. Board U. S. Examining Surgeons.
Fayette, Miss.

[This is the kind of letter which we like to receive from the readers of THE MEDICAL COUNCIL, and we wish that we had space to publish more of those forwarded to us in each issue. One with broad experience often will recall as old that which is announced as new by writers of the present day. This is well exemplified by Dr. Watts' praise of Dr. Smith's use of antiseptics in typhoid fever, renewed attention to which subject is found in the excellent article by Dr. Hosmer in this number of THE COUNCIL on the use of

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urotropin in its treatment of typhoid fever. We have no space to quote all the reminiscences in regard to Dr. Lewis, so we have forwarded this portion of the letter to Dr. Howard A. Kelly, of Baltimore, Md., who is preparing for early publication biographic data pertaining to the famous practitioners of America.—EDITOR.]

Placenta Previa.

EDITOR MEDICAL COUNCIL:

In the last number of THE COUNCIL, under the heading THERAPEUTIC SUGGESTIONS, you speak of having had many cases of placenta previa to deal with, with suggestions for securing safe dilatation.

In a large country practice I have hit only one case in twenty-six years, and I want to tell you the plan I adopted for securing rapid dilatation. The patient was a primipara with the first hemorrhage at the seventh month, quite severe. A hypodermic of atropine and teaspoonful doses hourly of Liquor Sedans, (P. D. & Co.) controlled the flow for the time, but in three days it recurred, and I was prepared to act. Labor had set in and there was a gush of blood with each pain. Cervix was dilated some but quite rigid. I melted about two pounds of vasaline and into this I dipped a five-yard roll of borated gauze, then, with two large retractors I packed the gauze into the cervix all I could crowd in and then packed the vagina tight full, put a pad on the valva, gave her one H. M. C. tablet hypodermically and waited an hour and a half, when she was sound asleep and labor pains were strong. I now removed the packing and I found the most thoroughly dilated birth canal that I have ever seen. I intended to use forceps, but when I introduced my hand I found the placenta centrally located and I thrust my hand through, got both feet and delivered a live, healthy child in less time than it takes to tell it. The placenta came away easily and there was no more hemorrhage.

This is only one case, but I would like to have others try it and report n THE COUNCIL.

W. A. MARNER, M. D.

Miles, Iowa.

Function of Appendix.

EDITOR MEDICAL COUNCIL:

In the April number of THE COUNCIL you give the function of the appendix, as stated by Dr. E. M. Corner. The following may be of interest to your readers:

In the "Animal Kingdom," Part I, Number 138, published in 1744, Emmanuel Swedenborg gives it as follows:

"The appendix, ceci vermiformis, the tongue of this balance of motion, opens its pores, and expands its cavity, synchronously with the cecum, and pours a new liquid, adapted for anointing and lubricating the wavy folds of the colon, and particularly for macerating the feces into the fundus of the cecum and the gorge of the colon. This liquid is proximately obtained from the cellular coat of the intestines; remotely, from the cellular coats of the peritoneum and of the abdominal viscera; the appendix ceci draws off and discharges the useless and harmful portion of it, just as the cecum itself draws off and discharges the alvine feces."

In the same work he gives one of the functions of the brain to be that of propelling the nervous fluid through the nerves to the body, by means of the expansion and contraction of the nerve cells, like so many little hearts, and that their motion is synchronous with the lungs.

WILLIAM H. THOMPSON.

Cleveland, Ohio.

Some Therapeutic Scraps.

By EDWARD WILLARD WATSON, M.D., Philadelphia.

Among the many remedies still retained in the pharmacopeia, some of them, it is true, in the extra-official list, it might be well to recall a few to mind, ere revision committees, bent on simplifying matters and imbued with the prevalent drug-negation heresy, decide to eliminate them altogether; for, once dropped, they will soon be forever forgotten.

One of the oldest of remedies is *sulphur*, now sold as precipitated sulphur, instead of the sublimed or "flowers of sulphur," and made famous by Dickens, as the remedy employed by the conscientious Mr. Squeers, of Dotheboy's Hall, properly mixed with molasses, to limit the too vigorous appetite of the half-starved victims. New England house-mothers, except, perhaps, in remote backwoods regions, have ceased, these many years, to give it mixed with cream of tartar and molasses each spring to everybody in their reach as a "blood purifier;" still the lowly itch insect dreads it when made into an ointment and used for scabies, but even here other cleaner and equally effective applications are supplanting it. Even the official disinfector prefers formaldehyde, but a new use for it may revive its waning reputation.

Some time ago we saw sulphur recommended in a medical journal as a means of removing that detestable odor that often

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clings to a woman, cured of gonorrhea, or longstanding purulent leucorrhea, an odor that makes her life a burden to herself and all around her, and which is supposed to be owing to the destruction of the normal "flora" of the vagina either by the gonococcus or by the powerful germicides which have been used in her cure (?). The sulphur is used locally, dusting the vagina, distended by a speculum, thoroughly every day for a week. After many trials we can say that it is very efficient, the disagreeable odor disappearing and being apparently replaced by the normal conditions.

Phosphorus has a use in the brachial neuritis of gouty or influenzal origin, which is, by the way, pretty much the same thing; almost every case of neuritis following influenza having a gouty past history. The older and more resistant the case is when first seen the more surely will it yield to phosphorus in one two-hundredth of a grain doses three times a day. The phosphorus is best given in granule, and it is well to make sure by examination that the granules are fresh and active. In using phosphorus in rickets, in the very minute doses that have been recommended, it is easiest given in drops from an alcoholic solution, in milk.

Lead, as lead water, or as a stronger solution made with one part of Goulard's extract to three parts of water, arrests incipient infection of wounds, one would imagine by a mechanical action, constringing the skin so decidedly that the circulation is partially cut off. To get the effect, the member or limb should be wrapped in a sheet of lint thoroughly saturated with this solution and the whole covered carefully with oil-silk and bandaged. As sugar of lead used internally, the remedy has fallen into deserved oblivion. Other safer remedies have taken its place in dysentery, and we no longer are liable to meet cases poisoned by the lead so given. Lead suppositories, too, are seldom ordered. Inflamed bunions, even suppurating ones, are relieved and cured by the persistent application of strong lead water.

Cimicifuga racemosa is another remedy threatened with extinction, though it still enters into the composition—if we believe the labels—of more than one popular, proprietary remedy. It is of use in whooping-cough, in slight nervous affections of children, in nocturnal incontinence of children, and in lumbago, in combination in the latter case with the salicylates, where it prevents the painful spasms of pain on moving. It seems to steady irritable muscles and, in that annoying condition met in nervous women and sometimes also in men, where sleep is frustrated by spasmodic twitching of the limbs, it will generally stop it. If it is too disagreeable in fluid extract, from the difficulty of suspending it in aqueous solutions, the solid extract of the U. S. P. may be given in three-grain doses, in pill or capsule, with good results. It has also been of use in cramps of the calf-muscles and twice in the writer's experience has stopped persistent quivering of the eyelid.

Alum is well known as a domestic remedy for gargles and douches. For incipient sore throats in those subject to them on exposure it is well to keep it on hand in lump form, especially when traveling. It formerly had great vogue in domestic practice as a remedy for onychia or "run-around," where it was used with milk to form a curd which was applied as a poultice to the finger.

Chloral hydrate, at its introduction lauded to the skies as a wonderful and safe hypnotic, fell into disuse from reckless use and overuse. When all other hypnotics fail, it will often be found, combined with a bromide, ten grains of each, to succeed. In asthmatic bronchitis where, as in midsummer colds and coughs, the bronchial spasm alone prevents recovery, *quebracho* and *grindelia* are probably more useful than any other drugs. Their fluid extracts should be given, dropped on sugar; they seem to both depend on he same active principle, *aspidospermine,* for their effect, but there seems to be no special advantage gained from using it.

The *alkaline drugs,* sodium, potassium, calcium, strontium, have each their own particular province in disease. Often, when sodium bicarbonate fails to give relief in gastric acidity, the bicarbonate of potassium will do better; a "potassium mint" can be used instead of "soda mint." Lime water is too often forgotten in prescribing for gastric conditions in adults.

Gum guaiacum, gr. iij, combined with sodii salicylate or aspirin, gr. v., and codeine, gr. 1-6, three or four times daily, will relieve some subacute aches in the joints and some cases of subacute gout which the salicylates alone will not reach as rapidly.

Chloroform in drop doses with syrup of ginger and tinct. of cardamom will relieve colic pains and so-called stomach ache; it can be given every five or ten minutes. Chloroform water relieves habitual nausea

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before eating, also the more acute nausea of gastric catarrh, or the morning nausea of the drunkard, or where an influenzal catarrh selects the gastric mucous membrane as a comfortable resting place.

Correction.

EDITOR MEDICAL COUNCIL:

May I ask you to correct the following errors which have occurred in the publication of my correspondence on the "Medical History of Napoleon's Campaign in Russia in the Year 1812," in the August number of your esteemed journal?

In the title of von Scherer's dissertation it should read "præsertim eorum qui Crigori *orti* sunt," not *octi* sunt. The German predicate before a name "von," as well as the French "de," meaning nobility, is never spelled with a capital, not even at the beginning of a period. This is a common American error to which I beg to call attention. Bismarck, like many distinguished noblemen, used to sign v. Bismarck, not Prince, not Count Bismarck, but simply v., or von Bismarck. How strange would it look to see "Von Bismarck."

A. ROSE, M.D.

173 Lexington Ave., New York.

The Business Side

OF MEDICAL PRACTICE

While we, as physicians, desire to be scientific students and practitioners of medicine, yet we desire also, for the welfare of our dependent ones and for the sake of our standing in the community, to secure a fair compensation for the services we render to our fellowmen.

The Economics of Medicine.

By the economics of medicine is understood these constantly changing conditions and every-day problems which affect the pecuniary rewards due the physician for his labors. THE MEDICAL COUNCIL, in its business talks, has saved many a hard-earned dollar to its subscribers, and it is hoped in future issues, as in the past, to have practical talks on how the physician may earn more money, and still have more time for his own improvement. For the past several years, earnest workers have been trying to show the laity in the United States how it is to the advantage of those sick and needing the services of a doctor to pay him well for his medical attention in order that the physician may have his necessary equipment, both in the way of post-graduate courses and in books, instruments, etc., to fit him *properly* to treat disease. No one desires to make a trades union out of the medical profession, but we do all want to act together in order to benefit the mass of those spending their time and energies in the practice of medicine. Economic conditions are rapidly changing over the entire world, whether for better or worse, as far as the white race is concerned, it is hard to say, and one must be prepared to adapt himself to the constant changes in his environment. But love for one's profession and for the general good of mankind must not be lost sight of in the mad rush for the almighty dollar.

The Necessity of Planting Cascara Sagrada.

One of the large American manufacturers of drugs uses over one hundred thousand pounds of *cascara sagrada* each year, and with the present means of collecting the bark the tree is destroyed by being cut down. West to the Pacific coast and northward into British America, from the canyons of the Rocky Mountains, is the native home of *rhamnus purshiana*,* but it has been cultivated from seed experimentally both in the Kew Gardens in London, and in the various experimental stations of the Department of Agriculture of the United States Government. By a special mode of pruning, the top of the plant may be grown into several branches, and one of these branches may be cut, after three or four seasons' growth, each year for the purpose of peeling. As another branch develops in place of the one removed, the life of the tree may be preserved for a number of years.

Here is an opportunity for the members of the doctor's family to earn some money, as the search for the wild trees has to be carried each year more and more into the remote localities of the West. Have any of the readers of MEDICAL COUNCIL tried to grow any other medicinal plants? If so, let us have your experiences for later publication.

*HENKEL, International Clinics, June, 1911.

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The Lure of the Land and the Middle-aged Doctor.

By Thomas S. Blair, M.D.,
Harrisburg, Pa.

Fourth Paper.

California.

California is a thousand miles long and, were it upon the Atlantic seaboard, would reach from New York City to Charleston, S. C. And yet this immense territory has just about as many inhabitants as has the city of Chicago. Aside from the larger cities of the state, it is a thinly settled land. This is pertinent data for the many physicians who are looking forward to living in California. Probably in few other regions are there more physicians in proportion to population. San Francisco, Oakland, Berkeley, Los Angeles, Sacramento, Fresno, San Diego and the other larger places have a large quota of physicians. And yet there are many thinly settled places or small hamlets with enough to do to satisfy the ambitions of the semi-retired physician who seeks to augment his income by ranching. This term, "ranching", is a most flexible one in California, as most people out there who devote an acre or so to gardening or chicken raising call themselves "ranchers." The men who are really ranching consider them "pocket handkerchief farmers." In the cities, the doctors are largely given to office hours, specialties, and a residence in the suburbs. It is not much of a secret there that many of these doctors make more from the land than they do from their practice.

The doctor removing to California runs into two snags at once: the state board examination is one of the most difficult in the United States and what he has learned about agriculture and horticulture, climate, seasons, house-building, house-servants etc., in the East helps him very little in this new country, which is a most unsettling place for the *conventional* Easterner. It is very necessary to read California-written treatises or to visit the state to get any adequate idea of their horticulture or of their mottled climate. Elevation, mountain ranges, the proximity of the sea or the desert are the factors determining climate. Latitude has practically nothing to do with the question there, nor has the season of the year very much more except as regards the rainfall.

Eastern doctors have heard so much about southern California that we will take little space with description. But some things are little understood. The south coast country is not a hot country. Even in summer, one gets too cool after night when sitting upon the porch. The region of San Francisco is often most uncomfortably cool in summer and is windy and foggy besides. It is only inland or in the interior valleys that one suffers from the heat of summer. Nevertheless, there is an all but tropical sun. One may be under the shade of an old fig tree and feel quite cool, but let him get a hoe and work ten feet out in the sun and he is soon anxious to discard his coat. Aside from what the hydraulic engineer, the builder of houses and the horticulturist and agriculturist have put there, the land is bare and desolate in summer and all brown and sepia in color. Rugged mountains, rock-strewn mesa, reaches of dried bushes, and dust over all, with a scattering of rattle snakes under foot. Native Californians say this is beautiful. Many eastern people do not think so when they get a chance, which is not common, to see the "back country". This is the unattractive side, and eastern people do not remember that the dry season of the south-west is in the summer and is the time when nature rests.

But lots of nice things can be truly said of California. Take it the year round, and it has the most enjoyable climate of the sub-tropics. There is almost no reasonable limit to what can be grown upon some land and in some part of the state. Growth there is phenomenal. Strawberries *can be made* to yield along the south coast for ten months of the year and raspberries for eleven months. Trees must be almost cut to pieces to make them head low enough to prevent the weight of fruit from tearing them to pieces. Tomatoes have actually lived for three years in almost constant fruitage and climbing seventy feet from the root. An acre means more, probably, or can be *made* to mean more than an acre anywhere else in this country. But these things are not *usual*. The good fruit orchards commonly yield abundantly. gardens thrive luxuriantly and flowers are an amazement to many not accustomed to California conditions.

But that same phenomenal acre has had more hard work expended upon it than have the acres of less-favored regions. California horticulture combines the work of planting in the temperate zone with the all-the-year cultivation of the tropics, the ditching of irrigation with the constant

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pulverizing and cultivating of the soil of "dry farming", the work of spraying of northern fruit regions with the fumigation of the tropics, twelve months of insect fighting instead of six months, twelve months of weeds, and the work of harvesting more than once a year. Lemons, for instance, are gathered every month, more or less. Then, too, much of this fruit is to be washed with chemicals, sulphured, dried, sweated, packed, pickled or conserved. There is work for man, beast, and even for the women and children and, all in all, there is but little room for lazy people upon a fruit ranch. A doctor going to California must be careful he does not buy too much land. Labor is very expensive and cuts cruelly into profits and the land is too expensive to play with. Horticulture in California is a *business* pure and simple—and yet not very simple to learn.

If you don't want to end your days in California, refrain from paying the state an extended visit. The newcomer may not like many things at first, but the life there grows upon him and, before you know it, *you* will be like all the rest and could not be driven out of the state by violent measures. But if you are given to inertia, make and save a fortune before you go. It is a good country for the man of spirit and industry, especially if he has a fair capital with which to begin.

In buying California land, remember that warranty deeds are nearly unknown there and it is well to employ a title guarantee company. The title to water is even more important than the title to the land. Adobe lands, which are really a heavy clay soil, are the despair of the California farmer. They are almost useless in a dry country. California sandy land may be most fertile, as the sand is not silica, but decomposed granite or other mineral detritus. Incidentally, there is a whopping lot of granite out there that is *not* decomposed and much of it is scattered around most inconveniently. One wants to know what California fruit land is for a depth of thirty feet. "Hard pan," marl, leechy deposits, alkali and high ground-water must all be looked into. It is a fine art buying land there wisely—and the real estate man is an artist on his side of the game. The only ways to live upon ones' wits in California are to go into the real estate business or start a religious or medical cult. Pathies, cults, wall-eyed fanaticisms, quackery, isms, "religions," etc., are thicker in California than in Boston, but real estate men are thickest of all. If you don't believe it, subscribe for a California newspaper. Land costs all it will yield interest upon under fair average conditions.

Real ranching in California requires a pretty heavy initial outlay and a good working capital in addition. Before an acre of orange trees come into really profitable bearing, there has been expended upon them from $350 to $600, counting land, trees, water, labor, fertilizer, chemicals, wear and tear upon equipment, taxes and interest. It is possible, although not advisable, to raise crops between the rows, and such crops may carry the expenses, but are not likely to pay a profit except in the case of very favorable market conditions. But this plan enables one to carry a citrus orchard without undue burden. Other trees are not so expensive nor do they require so much water.

The doctor undertaking ranching in California upon small capital will do well to plant *some* oranges or lemons and raise small fruits between them. Peaches are a quick fruit crop and vegetables can be raised between them. Figs, olives, pears, and nuts may be planted when conditions are favorable. Grapes are a satisfactory crop for fairly early yield. Strawberries and loganberries pay well when near to a city market. After three or four years, a small ranch will begin to be pretty well advanced toward a profit if well managed. Meanwhile, it is well to help out with chickens and vegetables and possibly a cow, and raise enough corn and alfalfa to feed them. There is refuse of feeding value and the corn will be mostly used for the horse. It is heating in so warm a climate. Root crops and pumpkins are good feed. After a practice begins to grow (and it will probably come slowly), and the trees begin to yield, it is just as well to eliminate some other lines. By that time, the doctor will be a real rancher and stands an excellent chance to make money.

The newcomer is apt to be discouraged with some phases of life and work in California. The state is big. If one does not like his location, it is right easy to sell and move to another portion of the state. In the higher regions one can have purely temperate conditions and a heavy rainfall and light snows in winter. The great interior valleys have features of their own, while the northern portion of the state

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is an excellent farming region. Dairying and stock raising find most excellent conditions in portions of the state, while the man who would like to duplicate the performance of his Oregon apple-growing friends, can find splendid locations for that. Quite aside from this, we know of many eastern men who are succeeding admirably in medical practice in California.

Florida Experience.

Dr. Blair kindly allows us to publish the following letter from a gentleman of broad and extensive experience, located in the extreme southern portion of Florida:

DR. THOMAS S. BLAIR, M.D.,
Harrisburg, Pa.

My Dear Doctor: I have just finished reading your letter in August issue of MEDICAL COUNCIL. Your article, is, perhaps, the best and fairest I have read on Florida. The fact, because it is a fact, that Florida is naturally the most desirable of all Southern States for homes all the year, is a reason why so many swindling land companies have bought up enormous quantities of almost worthless lands at prices ranging from a few cents an acre to perhaps a dollar and a quarter. Rarely ever have they paid more. These companies offer most attractive terms, taking a payment of perhaps $5 an acre and then a small monthly payment for several years until the $50 an acre is paid up, with the interest charged. An estimate made by a large New York advertising bureau published early this year said that the large Florida scheme land companies had expended last year considerably over one-third of a million dollars in Northern papers and magazines, to say nothing of the legitimate land owners and old established agencies who live and abide at the many different points of our State. I notice in the last issue of a popular magazine, a four-page advertisement of one of the rankest schemers offering land in Duval County, one of the poorest Northern counties of Florida, and making most dishonest claims as to fertility, etc. When you say that our soil is dependent on a large use of commercial fertilizer, the fact should not be overlooked that in some portions we obtain from a very moderate use of fertilizer a very large return. Take tomatoes, for an example. We use from a half to three-quarters of a ton per crop. This costs about $30 per acre at most. We figure on a crop of from 250 to 400 crates per acre, and several years experience has shown us that we receive from 50 cents to $1.50 per crate over cost of gathering and packing, fully averaging through season $1 per crate. Cost of making crop will average less than 25 cents per crate. This is light work. The lightest work we have. Crop work commences about last of October, seed beds having been prepared before.

Now, I want to say a few words about our country as a place for a doctor to settle in to make a home late in life. (I am no longer young myself.) I have had letters from hundreds of doctors. I have found them anything rather than practical. I have tried to impress on all that I have written to, that a small capital is necessary to start with. Renting houses in our section is all but impossible. People live in their own houses and scarcely any are to be rented. But if a doctor or any other practical man has a reasonable capital and has sense enough with it to make a careful investment he cannot fail to make a success. If he relies entirely on practice he may not get on, but a living can be made easily. But I would not advise a doctor to come to our section unless he can properly establish himself; then, if he will give his time to overseeing a crop of tomatoes he will have a safe living assured. Then having his fruit trees started they will grow while he sleeps and while he works at cropping, etc.

I came to this extreme southern portion of the State less than five years ago with less than $2,500. I last week sold my home place for $7,500 and have a new place started close by. Property I have besides is worth easily more than place I sold.

Of course, property has advanced in value, but it will for the next ten years at least continue to advance steadily. Every time I have made a sale I have managed to buy another piece of land. And when I buy it I improve as I can. This pays well.

I want to say that our summer climate, because of the geographical location away down between ocean and gulf, is always pleasant. We have not had an unpleasant day this summer from extreme heat, and our nights are always cool enough for blankets. A lady came down from the Orange Mountains of New Jersey, leaving there August 1st, remained here a week, leaving to-day to return, after buying a place here. She had often been in Miami in the winter season, but never before in summer time. She wrote many letters while here, and in every one she told the folks who had been fighting mosquitoes there on the mountains all summer that she had not seen or heard a mosquito while here. We have scarcely heard or seen one this summer, and last summer was almost entirely free from them. As we clear up the underbrush and the woods, the breezes seem to carry them away.

Our section here where I live is increasing in population faster than any other in the State. Four years ago there was not a mile of good roads scarcely below Miami. Now there are hundreds of miles and still many more miles being built. Since I started this letter, a few minutes ago, over a dozen autos have passed my office window, going to or from Miami, twenty-six miles above us. Malaria has never been known in our section. Our water is pure, but, being from wells drilled down in the coral rock, is hard but not unpleasantly so. Parties who have suffered for years from constipation have received immediate benefit, while diarrhea is all but unknown. Our section never suffers from drouth, our soil is very stony and holds moisture. We have no sand, but soil is a red, clay-like loam, very suitable for fruits of all kinds in this climate, Pardon this long letter, but your letter was so instructive that I thought you might like to hear from a part of Florida that is entirely different from any other part of the State or of the United States.

S. A. MURDEN,
Editor and Proprietor of Tropical Topics.
Modello, Dade County, Fla.

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Fee Splitting.

EDITOR MEDICAL COUNCIL:

Some quite mechanical performances seem to call for very slight muscular effort, even though no ingenious mechanism has as yet been invented to do the work. One can, for instance, split a fee without an axe, and yet without much muscular fatigue. The fatigue is rather one of morals than of muscle, for the same act that splits the fee splits also the moral code that we are all (?) striving so hard to live up to, and is a fine example of the conservation of energy, or in homely language, "Killing two birds with one stone," not counting as a bird the victim of the operation (there is almost always an operation and a victim), for it is always the surgeon's fee that is split; the practitioner's fee cannot be split, since it is, like Sir Isaac Newton's definition of an atom, so small and so hard (to get) as to be indivisible by any power on earth as yet discovered. The journals are full of this subject of fee splitting, yet we cannot help noticing that the men most outraged and indignant are generally surgeons, who, getting very large fees for short work, are reluctant to part with any proportion of them, and that no struggling doctor, getting a dollar a visit, cries out against the practice.

Now, we are very far from apologizing for fee splitting; it is all wrong and the "laborer is worthy of his hire," but here one laborer so often takes all and leaves nothing for the other laborer, who may have worked hard to get him a job. Evidently back of all this outcry lies the ever-gnawing grievance that the surgeon, who really plies a mechanic though sublimated art, earns proportionately too much. The physician, working hard with his brain, bearing great anxieties, and physical strain as well, gets no adequate reward, or if he does, then the surgeon gets too much.

The physician, called to a case of typhoid fever, for example, which runs, on the average, four weeks, gets from one to two dollars a visit (when he gets it). Four weeks are twenty-eight days, and allowing two visits a day at the height of the disease, that makes, perhaps, forty-two visits, and his great remuneration for his knowledge, skill and responsibility and the wear and tear of it all, will range from forty-two to eighty-four dollars, and that often comes like pulling teeth, if it comes at all. Now, the surgeon, with everything at his hand, an interne to visit a case afterwards and communicate with him by telephone if he needs advice, and a trained nurse he trusts, but does not have to pay, in operations on patients in the same station of life easily charges for his half-hour or hour of work anywhere, if we trust common report, from $100 to $5,000, though the latter figure may be rare, and the physician cannot but feel that fingers must have been made before brains as well as forks. Either one is paid too little or the other too much, and hence the origin of the vice of fee splitting, for the doctor, now a sign-post, sends his patient who requires operation to the surgeon and will probably see him no more, not because he dies or is cured, but because operations too often seem to open the way to more operations and introduce the patient to other men on the hospital staff or belonging to the little professional closed circle in which the surgeon revolves, who specialize on his ears and eyes and nose and kidneys and stomach and all other organs, till his pocketbook gives out.

Hence, seeing the hope of their honest and legitimate gains gone, the physicians, like the image makers of Ephesus, strive to stem the tide of dollars so rapidly flowing away from them, and finding where they flow they sometimes ask the surgeon "to stand and deliver."

EDWARD WILLARD WATSON.

Our apologies are due to the citizens of Matagorda County, Texas, for the reply we gave to an inquiry in June COUNCIL. The map we consulted was not quite up to date —and they improve fast in that country. The county now has three railroads and a population of over 13,000.

If our readers desire explanation of any obscure points in any article in THE COUNCIL, they should address the author direct, enclosing stamp for reply. What is obscure to you may be so to many others. The author may reply direct, or he may address all at once through a further article in THE COUNCIL.

In preparing an article for publication you often make it far more effective by sending with it suitable photographs or India ink drawings for illustrations. We will always be glad to make plates, of course at our expense, and when the article is published will send the plates to the author for any future use he may desire to make of them.

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BEST IDEAS FROM RECENT LITERATURE

Tetanus.

We are favored with a report on an exhaustive paper on this subject, read by Dr. Smith, of Bay City, at a meeting of Santa Fé surgeons at Temple, Texas, on January 10-11, 1911, and reproduce the same for COUNCIL readers:

We are taught and believe that the tetanus germ is deposited after the injury, within the sheath of an injured nerve; that the toxines travel, sometimes slowly, other times rapidly, from the place of contact to the spinal cord; there becoming active and producing symptoms of the malady. Upon the rapidity of this migration from the seat of injury to the spinal cord depends the stage of incubation and upon this in a large degree is dependent the severity of the attack. We no longer believe the germ is carried there by circulation.

Treatment of Wounds.

All wounds are subject to tetanic invasion. Punctured wounds of the feet, wounds received at and about barns and outhouses, and others made by blank cartridges are most often the seat of invasion. The necessity for prompt and radical treatment of all such wounds is imperative; to wait a number of hours after injury is received and then to make a little incision, wash out a little and put a little antiseptic dressing on, is poor practice, and may lead to a fatality. Under a local, or better, a general anesthetic, make a dirty wound a large free drainage tube. Do not cauterize, for it but sears it over and acts as a retainer. Inject into the surrounding tissue a quantity varying from 500 to 10,000 units of antitetanic serum, and maintain cleanliness and free drainage. After this is done it is well to give 5,000 units or more of serum from four to six hours later. If there is a place in the treatment of tetanus for the serum, it is in the wound; if there is a time to use serum, that time is just as soon after receipt of injury as is possible.

History of Fatal Case.

I shall now give you in detail report of a fatal case treated by me last August: F. Z. German, a farmer, aged about 28 years, strong and healthy, first came to my office for treatment August 13, 1910, about 2 P. M., complaining of cramping in abdomen, stiffness of jaws, and much difficulty in taking a long breath. Temperature and pulse normal, respiration irregular. He gave a history of having stuck a nail in his foot four days previous, and waiting about twelve hours before consulting a physician, who promptly opened and cauterized the wound. I at once told the man I very much feared that he had tetanus, but he attributed his condition to having taken a severe cold, and would not at that time submit to any treatment from a tetanic standpoint. He returned home a number of miles in the country, from where a few hours later I was 'phoned to come to him at once, as his condition was growing more serious. Taking with me 3,000 units of serum I went to him, at once gave the serum, and removed him to the sanitarium, where I could see him constantly. In order that you may have an idea of the futility of medical treatment in delayed cases such as this one, I am, at a risk of tiring you, going to give a regular detailed statement of his condition between the time of admittance to the sanitarium and his death.

Treatment.

From 1 A. M., August 14, until 1 A. M., August 15, he was given 12,000 units of serum. From 1 A. M., August 15, to 1 A. M., August 16, 16,500 units. From 1 A. M., August 16, to 1 A. M., August 17, 19,500 units, and from 1 A. M., August 17, to 2.50 P. M., August 17, 6,000 units, making a total in eighty-eight hours of 57,000 units. Of this amount 6,000 units, at 10 A. M., August 16, were injected into the spinal canal, between fourth and fifth lumbar vertebra, and 500 units were injected into wound in the foot.

To Eliminate the Contents of the Bowels.

Between August 14, at noon, and August 16, at 2 P. M., 1-40 grain eserin was given hypodermically at periods varying from three to six hours, until the total of 1-6 grain was used. From August 14, at 1 A. M., at varying intervals, sulphate of magnesia was used until a total of 10 ounces was given. To this was added frequent soap-suds enemas. Sulphate of magnesia in large amounts was also given by hypodermoclysis. As a result of all this, one movement of the bowels was noted, which, together with the expelling of gas, gave some temporary relief to the distended abdomen.

To Control Spasms.

August 14, 6 A. M., morphine sulphate, 1-8 grain, by needle. At 12 noon, and at 11 P. M., 20 grains of chloretone by rectum. August 15, at 12.30 A. M., and 3 A. M., 20 grains of chloretone were again given by rectum. At 5.30 A. M., bromide of potash, with chloral hydrate, 30 grains each, were given by the rectum; at 6.45 A. M., and at 9.30 A. M., 3-8 of a grain of morphine was given by the needle, to be followed at 11.30 P. M. by 20 grains chloretone by rectum. On August 16, at 2.30 A. M., 20 grains of chloretone were again given, to be followed at 8 A. M. and 10 A. M. by morphine, 3-8 of a grain, by the needle. At 10 A. M., 5 c. c. magnesia sulphate, 25 per cent. solution, was given by hypodermoclysis, making a total of 2 grains of morphine, 100 grains of chloretone and 30 grains each of chloral and potash being given in 26 hours.

To Sustain Patient.

August 14, 5.30 P. M., and 9 P. M., 16 ounces of sweet milk were given through a tube by the mouth; this was repeated at intervals of three or four hours on the 15th. On August 16 the jaws were so tightly closed the tube could no longer be gotten between the teeth, and various amounts of milk, liquid peptonoids with normal salt were given through a nasal tube. Enteroclysis was resorted to during the 16th and 17th, using normal salt and liquid peptonoids.

General Remarks.

During the eighty-five hours at the sanitarium, 79 ounces of urine were obtained by the use of a catheter at given intervals. As noted before, there was but one bowel movement. Spasms of muscles of thorax and abdomen returned at intervals in frequency from five minutes to two or three hours. Spasms of abdomen and lower extremities were controlled completely by the

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spinal injection. The jaws were locked constantly from 2.45 P. M., August 15. The pulse at 1 A. M., August 14, showed 74 full and regular, increasing steadily until just before death, reaching 130, maintaining a good volume at all times. Temperature remained normal until 9.30 A. M., August 15, when it registered 97.5 by rectum, reaching 105½ a few hours before death, and 106 thirty minutes after death. Respiration gradually increased in frequency and became more labored, and death was due to a hard spasm which paralyzed the respiratory center. Microscopical examination of spinal fluid was negative, and I was refused the opportunity to examine spinal cord.

In conclusion, I wish to reiterate I firmly believe there is but one place to use serum, and that is in the original wound; but one time to use it, and that is at once. I wish further to say that the price is almost prohibitive, and a physician who uses many thousands of units late in the disease runs up a cost account with little or no chance of benefiting the patient.

Physical Agents in the Treatment of Diseases of the Skin.

Dr. James H. Sequeira, of London, in discussing the progress of dermatology since the time of Hunter, admirably sums up the additions to our armamentarium in the past twelve years in the way of application of heat, cold, light, electricity, ionization, X-rays, and radium to the cure of diseases of the skin.

We reproduce an extract from the *Lancet* of June 10, 1911:

To Finsen we owe a means of treating lupus vulgaris which far surpasses all other measures. The action of concentrated actinic light upon the lupus nodules causes their disappearance with the formation of a cicatrix, which, from the cosmetic point of view, leaves nothing to be desired. The X-rays were first used by Schiff and Freund for the treatment of a pigmented mole, and from that has been built up a large field of therapeutics. From its application to ulcerating forms of lupus we passed on to the treatment of rodent ulcer, and to other forms of cutaneous cancer, and in a large proportion of cases where the disease is limited to the skin we are able to cure these redoubtable conditions. Even where the disease is of long duration we can still ameliorate the condition of the patient.

The early recognition of the influence of the X-rays upon the hair led to their use as depilatory agents in ringworm of the scalp and beard and in sycosis. For a long time the applications were empirical, but the work of Holtzknecht, Sabouraud, Noiré, and others, has placed in our hands instruments of precision by means of which we are able to measure the dose of the rays administered and to avoid injuring the skin. When we remember that it was no uncommon thing for a child to be under treatment for ringworm for a year or two, whereas nowadays we can cure the condition in a couple of months, we may justly be proud of the progress which has been made.

The X-rays naturally suggest radium, and here again we have an agent of remarkable potency, an agent which we have learned to use scientifically, thanks to the work of Wickham and Degrais and others. For the treatment of rodent ulcers of moderate size the simplicity of the treatment and its results are so remarkable that they approach the miraculous.

The latest measure to which attention is devoted is the application of extreme cold. At first liquid air was used, and the results of the treatment of some forms of nevus by this agent have been remarkable. Unfortunately, the treatment is very expensive, and this led to Pusey's introduction of the carbonic acid snow. Here, again, we have a perfectly simple agent, quite manageable and affording excellent results in nevi of limited dimensions, and some forms of cutaneous disease, notably chronic patches of lupus erythematosus, in which disease Sequeira has found better results from treatment by this method than by any other. High-frequency electricity had a certain vogue, but it is now recognized that its sphere is limited. Ionization, which we owe to Leduc, has also a certain limited sphere of usefulness.

A Review of Reviews of French and European Medicine.

By Thomas Linn, M.D.,
Nice, France.

General Pathology.

Anaphylaxis.—Professor Richet states that he finds the injection of an albuminoid substance, that is foreign to the organism, provokes an immunity reaction; that is to say, a formation of an antitoxin, with an increased action of the leucocytes, but in certain cases the effect produced is an opposite one, and the organism becomes more sensitive in place of becoming immune.

This phenomenon is called "anaphylaxis"; not a real regeneration, but the contrary action to protection.

All proteids can be used in making these intravenal, or intraperitoneal or intercerebral injections, and will produce anaphylaxis. This seems to appear after a certain degree of incubation, that as a rule runs to about two weeks; then, when the toxic or non-toxic albuminoid that has been injected has disappeared, the anaphylaxis appears and continues for a very long time, perhaps this will even be unlimited.

Immunity and anaphylaxis may go on together in the same animal, but they are quite different processes.

It is probable that there exists in the blood of the animal that is subjected to this treatment some substance that causes its action.

The symptoms are always the same, no matter what is injected—a fall of arterial pressure, vomiting, pruritus, dyspnea, dila-

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tion of the pupil, motor power lost, violent intestinal contractions, diarrhea and, very often, intestinal hemorrhage.

Dr. Patrone, in Italy, has been making some experiments of the anaphylaxis of grippe toxins, and finds that, in making injections with proof endotoxin, the animals take on anaphylaxis. He has also used endocranial injections with the same results.

Anaphylaxis, by the Digestive Tract.—Dr. Lesné thinks that a large number of cases of illness, by taking albuminoid substances, such an egg's milk, muscles, and other shell fish, as well as strawberries, can be considered as a phenomenon of anaphylaxis of alimentary origin.

The experiments that have been tried to prove this have not so far succeeded. Active congestion in dogs and rabbits was produced by the injection of white of egg into their veins.

One curious result of these experiments was that, when the injection was made into the stomach and small intestines, no anaphylaxis was produced, but it was constantly found when the albumen was injected into the large intestine, so that it proves that the action of hydrochloric acid is not the cause of anaphylaxis, and the non-anaphylaxis of the stomach and small intestinal tract is owing to the fact that there is a transformation of pepsine and the albuminoids when put together in these parts.

Dr. Sergent shows that a white line on the skin is proof of suprarenal insufficiency. It is quite characteristic, and is found mostly in tubercular cases. It has been attributed to arterial hypotension, but Dr. Sergent, himself, does not think that it is owing to cardio-vascular asthenia. In two cases that he reports, he found tachycardia with hypotension, and he believes that the white line is owing to some irritability of the arterial vaso-constrictors, that causes a paralysis of the skin, as this is well seen in the general toxic condition created by suprarenal insufficiency. It is certainly an excellent diagnostic sign of the state, as was shown by the postmortems made by Drs. Sireday and Tinal.

When the white line is found, it is an indication for suprarenal therapy, and diet with vegetable soups, as well as intestinal antisepsis, combined with complete rest in all nervous cases.

Considerable attention has been paid lately to the importance of the *chemical examination of sputum, as to albumin.* Drs. Gantz and Hertz have examined one hundred and twenty-five cases, of whom sixty had pulmonary tuberculosis, and found by chemical analysis that the albumin reaction is always present in tubercular cases in all its periods.

It is absent in bronchial catarrh, and this leads to a practical point: as these prove that we have a very valuable clinical fact, for even before they found the bacillus of tuberculosis in the sputum, they were able to find albumin by chemical tests, and it, therefore, is of the utmost importance to use this method in diagnosis of such cases.

Nervous System.

Tic Douleureux.—Dr. Ferran has had such excellent results in his new treatment of this condition that he advises it in preference to surgical intervention, which he claims is very uncertain. His treatment is by a deep injection of cocainized alcohol and, by this, making a chemical section of the nerve. With great care this result can be attained by attention to the anatomy of the parts, and the operation is not dangerous in itself, and should always be done when other means used fail, and before surgical intervention is thought of.

In Epilepsy.—Professor Bouchard calls attention to the fact that it has an intimate relation to constipation, and that epileptic phenomenon often means a defective intestinal state. Dounner has reported a case of a child of 7 years of age, who was apparently cured by a treatment with cascara sagrada.

Heart.

Dr. Fiessenger recommends complete rest in bed in angina pectoris; he keeps his patients for two weeks to a month on their back in all organic cases. They are put upon a lacto-vegetarian diet also. The arterial tension is lowered and the pains are much improved by this treatment.

Use of Opium.—In aortic troubles, Professor Lemoine considers that the opium products and its alkaloids are the very best treatment for heart medication in many of these diseases. Clinical experimentation has proven that morphine brings up the contractile energy of the heart and favors its action by dilating the vessels and by a regulation of the arterial pressure. In stricture of the aorta, there is a diminution of the blood mass thrown by the ventricle at each systole into the aorta, and, there-

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fore, arterial and cerebral anemia takes place.

In aortic regurgitation or insufficiency, there is a reflex of blood into the left ventricle during diastole, the ventricle is overloaded, dilates, and hypertrophy takes place while the myocardium is so weakened that cerebral anemia again occurs. This leads to the therapeutical indication: opium, because it causes congestion of the brain. Codein acts in the same way, so that it is well to begin with its use, and it is best given with coffee, as this regulates its action. This kind of treatment can go on for years, and should be given in the morning only. When the cerebral anemia becomes greater with age and in time, then morphine itself should be used, in the same way. It may well be that, in cases who have albuminuria and arterio-sclerosis, you will feel inclined not to use this treatment, but Professor Lemoine does not think that it is a contra-indication at all, but that the opiates will prolong the existence of the patients, and make them more comfortable in every way.

Tachycardia is also, of course, calmed by opium, but if it is from a nervous cause, it had better not be used, for fear of morphinomania.

In parenchymatic nephritis with abundant albumin and lesions of the kidneys and liver, this treatment is contraindicated.

Dr. Lemoine is quite aware that many doctors fear to use morphine in mitral diseases, thinking that a weakening of the nervous system would occur, and that a contraction of the myocardium take place, but in practice this will be found not to be true, for good results have always been found here in all periods of asystole, and even in the premonitory symptoms, when the heart begins to fail, Dr. Lemoine has found that he can get it back into compensation and prolong this condition, for he finds that opium strengthens the beating of the heart and regulates it. It must be remembered that Professor Lemoine gives only one or two centigrams ( ) as the dose per day, in the morning only.

Dr. Sicard is hostile to all operation in exophthalmic goitre cases, as he has constantly seen operative intervention followed by death and, in some cases, a return of the trouble. He proposes the use of three drugs: quinine, soda salicylate and calcium chloride, given alternately. For the first week he gives one and a half to two grams of the sulphate of quinine per day, and the next week two to four of the salicylate, then for two weeks calcium chloride, three to four grams daily, and then follows this by a rest of a week. He finds that iodine and its injection into the lobes of the thyroid simply increases all the symptoms and may be dangerous in this disease.

Purgation.

Dr. Gallois finds that many families, fearing appendicitis, have got into the habit of over-purgation, which certainly acts as an irritant to the intestines, and may lead to chronic enteritis, and may even increase the constipation in time and lead to appendicitis itself, that they fear. He, therefore, wants to warn the public as to frequent use of purgatives without any special need of them, and thinks that Jubol will be a drug that will heal them and not irritate the intestinal walls, while Graham bread and the vegetarian system will be still more useful.

Tincture of Iodine in Treatment of Typhoid Fever in Children.

Dr. Ponticaccia, of Venice, has systematically followed up this treatment in twenty-seven cases in the Children's Hospital, and he has met with perfect success. In nineteen of them sero-reaction gave a net result; eight of the cases were private patients. The children were from two to three years of age and they had daily from eight to ten drops of the tincture of iodine in sweetened water, all during the fever part of the cases, and for some days afterwards. The dose is per day, and may be given in a tablespoonful of sweetened water, and in two to three doses. There was no other treatment given, and all the cases got well. It is thought that there is a microbicidal action on the Peyer's patches and the microbes of the intestine.

Dr. Chavanne proposes the following formula for local anesthesia:

℞ Ac. carbolic, ...āā 2 grams
Menthol,
Quinine hydrochlor..1.40
Adrenalin 0.004

This syrupy liquid is used carried up in the usual way, on cotton, to the parts to be touched. It produces a good anesthesia and the actual cautery can be used soon afterwards, and there is no cocaine danger.

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The Evolution and Treatment of Tuberculosis in Syphilitics.

Syphilis and Tuberculosis are the most common of our diseases, and we find them associated very often in the same patient. This has led to the idea that syphilis is an important factor in tuberculosis.

It is an every-day observation, that tubercular patients are prone to run after public women, possibly from the overheated state of their system, when the circulation is high and fever is present. This leads to the venereal diseases we find so often in this class of cases. In fact, most modern writers in France, at least, think that both acquired and hereditary syphilis is an important matter in tuberculosis.

In the *direct* infection tuberculosis is very often produced owing to the throat and larynx troubles of syphilitics. Professor Potain long ago called attention to this fact, and Dr. Landouzy has confirmed it. It is, however, the *indirect* forms that are most frequently seen. Then, again, syphilis predisposes to tuberculosis, simply because the whole organism is profoundly attacked in its vitality.

Professor Landouzy says: "Syphilis makes the bed for tuberculosis." Ricord often referred to what he called "pox-scrofula." It is certain that the reunion of these diseases make a complex lesion, that seems to be on one side syphilis and on the other tuberculosis. Fournier writes of hybrid-strumous-syphilis: "In reality there is no exact mixture, but simply and only the fact that the two maladies appear in the same person." Leloir has carefully studied lupus and syphilis together, and this form is one of the best known. Treatment has shown that the syphilitic lesions can be often cured by mercury, but it does not seem to affect the tubercular infiltrations. This would seem to prove that these diseases do not actually combine, but are only placed side by side, or one upon the other, without blending.

As to *local-tuberculosis* in syphilitic patients, the so-called "syphilo-scrofula," we must first of all ask ourselves what is this scrofula? It is, or was, considered by some physicians of note to be a derivative of syphilis, but others say it has nothing to do with it at all. Fournier's opinion is, that it should be attached to the direct manifestations of hereditary syphilis or late-syphilis. Professor Gaucher thinks that scrofula creates a special predisposition to tuberculosis by an inherited form of syphilis. In any case it makes a complex condition that is extremely difficult to diagnose and say what is hereditary-syphilis and what is scrofulo-tuberculosis, with syphilis.

Now as to *pulmonary-tuberculosis* (or syphilo-tuberculosis) in the lung, there are two sorts. The first is the phthisis case that gets syphilis; and the second, the tubercular trouble that syphilitic patients acquire. The first is rather uncommon, for a consumptive, that treats himself and follows out his doctor's advice, does not expose himself to the danger of syphilis; still there are some who cannot be restrained.

The impression among physicians, that if this class of pox patients has also tuberculosis he is doomed, is not true. It, of course, depends on the nature or form of the trouble, and the quality of the added difficulty. This leads us to speak of the curious fact that syphilis seems to favor the cure of tuberculosis in some cases, but certainly not in enough of them to recommend the getting of the new disease.

When, in the second case, tuberculosis comes to the syphilitic, it may occur in the first part of it, when it leads to a very serious danger in anemic and weak persons, who are often carried off in hospitals and private practice in a few weeks by a "galloping" form of disease.

In the second and tertiary forms tuberculosis is not so dangerous or fatal; even in weak patients it will sometimes cure rapidly.

Professor Fournier and his students and followers in France insist that the hybrid nature of syphilis and pulmonary tuberculosis is very common, and it is probably for this reason that mercurial treatment will improve always, and cure sometimes, the tubercular forms of syphilis.

Landouzy has lately shown that old syphilitics often become, as he calls it, "scleroto-tubercular." *It is more than probable that many of our fibrous forms of tuberculosis and pulmonary sclerosis are from an old syphilitic trouble that has not been diagnosed.*

In a number of so-called emphysema cases syphilis will be found, if looked for: in fact, even in old bronchial patients it is well to look for syphilis. This will sometimes be found by the inequality of the pupils or an absence of reflex to light, and.

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above all, as Gaucher has shown, by buccal leucoplasias.

Dr. Emile Sergent, physician to the Paris hospitals, has written an interesting book lately to prove that fibrous tuberculosis is very often simply a manifestation of syphilis that was not found out.

When tubercular trouble comes on in hereditary-syphilis, Professor Hutinel states that when a pulmonary cavity or cavern is found in babies it is a sign of hereditary-syphilis, and not a gummata, but a real tuberculosis with Koch's bacillus. In such cases it is well to give syphilitic treatment, as it has been proved to be of use.

The prognosis of all these forms and cases is not so serious as has been made out; it, of course, depends on the virulence of the case, but still it can often be modified by prompt treatment.

Treatment.

In a number of our books the specific treatment of tuberculosis in syphilitics is said to be dangerous, that it favors the evolution of the disease, and can provoke an acute condition. In France all the modern authorities say that this is *not at all true*, and their present opinion can be stated to be, that in tubercular-syphilis the specific treatment will actually cure the syphilis, and even produce an amelioration of the tubercular condition and the general state of the patient. In reality, there is only contra-indication in the acute forms of tuberculosis.

It is understood that mercurial treatment is meant by specific, and *not* iodide of potassium or mixed treatment, for the iodides may give rise to acute symptoms.

It can be given by the three methods: injection, friction or rubbing, or by the mouth, according to the case. Of course, if the tubercular case does not digest well, it is best to let the stomach alone. Only the soluble salts should be used in hypodermic injections, and friction on the thorax seems to be the preferable method.

As to the regular medication and treatment for tuberculosis, it may be used also at the time or after a series of frictions.

Arsenic can be added, and the new "*606*" treatment seems to be just the thing to use; above all, if the mercury does not seem to act, and if there seems to be good reason to hasten the effect of treatment.

The Year's Progress in Rectal Diseases.

The American Proctologic Society held its thirteenth annual meeting at Los Angeles, Cal., on June 26 and 27, 1911, the President, Dr. George J. Cook, of Indianapolis, Ind., in the chair.

The papers read contain matter of great interest to the general practising physician, who is usually very poorly informed in regard to diseases of the rectum and anus and proper methods of treatment. We give below a condensed abstract of the principal papers read. If our readers wish any of the papers in full, they will address the respective authors, enclosing postage, and a reprint will be supplied when published.

Some Observations Upon the Surgical Anatomy and Mechanism of the Colon.

By GRANVILLE S. HANES, M.D., of Louisville, Ky.

Until comparatively recent years, diseases of the colon and sigmoid and the surgical anatomy of each received but scant attention. Recently, however, much valuable information upon this subject has been developed. Robert Coleman Kemp, in his work on "Diseases of the Stomach and Intestines," says that Dr. J. M. Mathews was the first to call attention to sigmoiditis and diverticulitis of the sigmoid.

The entire length of the large bowel in situ is found to be much shorter than when it is dissected from its attachments. An ordinary thirty-inch colon tube has sufficient length to extend around the lumen of the large bowel to the cecum. While this has not been done in the living individual, it has been done in the cadaver, and radiographs of the same are on record.

It is almost universally believed that ordinary flexible colon tubes can be manipulated in such a way as to traverse the entire course of the large bowel around to the cecum. It has been proven by a number of investigators that such an achievement is impossible in the normal bowel. The average length of the sigmoid is about eighteen inches, and this being a floating portion of the large gut, it is almost impossible for an instrument to pass beyond the middle half of the sigmoid. Should such be possible and the tube enter the descending colon it would be a physical impossibility for it to pass either the acute angle at the splenic flexure or the hepatic flexure. The failure of instruments to pass high into the bowel has been demonstrated by X-ray pictures.

Dr. Hanes demonstrated the difficulty in passing any instrument through the hepatic and splenic flexures by introducing a thirty-inch, No. 20, French, soft rubber catheter into the caput coli in an old appendicostomy case. He failed by any kind of manipulation to pass the catheter through these flexures. The tube was allowed to remain in the head of the colon for twenty-four hours with the hope that peristalsis would carry it around, but this failed. After manipulating the second time three hours later four inches of the catheter appeared through the anal opening.

He forced bismuth solution into the head of the colon till the wall of the gut was thoroughly

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distended, and then Dr. E. Bruce made a skiograph. No regurgitation into the ileum occurred. This experiment was repeated a number of times with the results as above given. If the ileo-cecal valve allows no reflow into the ileum, then exceedingly large amounts of water injected into the bowel are retained in the large gut, and not a part of the amount passed into the small bowel, as is supposed by some.

In an old appendicostomy case, with the patient on the left side, coal oil was poured into a colon tube that had been introduced three inches into the rectum. In six and a half minutes the oil was flowing out of the appendicostomy opening. The amount employed was thirty ounces. This clearly demonstrates that liquid will easily pass around the entire colon without flowing through a tube. The point is also made that coal oil is much less irritating to the mucosa than plain water or ordinary aqueous solutions.

The capacity of the large bowel in situ was measured by temporarily closing the opening of an appendicostomy case and allowing coal oil to flow into the rectum as long as the patient could tolerate it. At a later date the same experiment was made by allowing oil to flow into the head of the colon. About the same amount of oil was received in each case. After making the same experiments in other cases it was decided that the average large bowel had a capacity, varying between fifty and sixty-four ounces.

The capacity of the rectum was ascertained by inverting the patient and placing a colpeurynter at the junction of the sigmoid and rectum, just within the sigmoid. The colpeurynter was then distended with air until no fluid could pass into the sigmoid. Coal oil was allowed to flow into the rectum till no more could be received. It was then drawn off with a catheter and the average amount was found to be between fourteen and seventeen ounces.

He insists that the inverted position (Hanes) is much to be preferred by both patient and operator when any kind of illuminating instruments are to be employed in the rectum or sigmoid.

Have We an Ideal Operation for Internal Hemorrhoids?—A New Hemorrhoidal Clamp.

By A. B. Cooke, M.D., of Nashville, Tenn.

An ideal operation for internal hemorrhoids must embody the five following surgical principles and precepts:

1. Complete hemostasis.
2. Immediate closure of the operative wounds.
3. Preservation of the function of the parts.
4. Permanency of cure.
5. Due consideration of the factors of safety, simplicity of technic, time required for recovery, and the amount of post-operative discomfort.

The ligature operation violates principle 2.

The clamp and cautery operation falls short with reference to the fourth class of principles in each of its several points.

The Whitehead operation violates principles 1. 3 and 5, and is, moreover, an unnecessary and unjustifiable procedure.

The operation by means of Earl's clamp is a modification of the Whitehead method and a vast improvement upon it, but is apt, likewise, to violate principle 3.

Pennington's enucleation operation is open to criticism under classes 1 and 5 of the surgical principles. In spite of its ingeniousness, it is dangerous.

The clamp and suture operation described by the author fulfills all conditions and is entitled to be considered the most nearly ideal of any yet devised.

A new hemorrhoidal clamp designed to facilitate the last named operation was presented and strongly recommended.

A symposium on constipation embracing seven different parts of the subject was presented as follows:

Etiology of Constipation.

By Horace Heath, M.D., of Denver, Col.

Dr. Heath mentioned two groups—miscellaneous and mechanical. Under miscellaneous the author regarded heredity as unimportant, but attention was called to the faulty instruction of children in certain families. He stated that the constipation of infancy was due to undeveloped muscles, and of old age to inactivity and atonicity.

Under mechanical causes he considered diet, sedentary life, abnormal positions, angulations, coloptosis and hypertrophy of the rectal valves.

The predisposing diseases mentioned were colitis, stricture, proctitis, fissure, hemorrhoids, fistula, polypi, enlarged prostate and malignant growths.

Physiology of Constipation.

By Samuel T. Earle, M.D., of Baltimore, Md.

Earle calls attention to the sensibility of the alimentary canal in connection with its bearing on constipation. It has been shown that the stomach and intestines are quite insensitive to tactile and thermal stimuli, but that the esophagus and anal canal are sensitive. The whole of the alimentary canal is, however, sensitive to distension, which produces at first discomfort and subsequently pain. The rectum appears to be more sensitive than the rest of the intestines to distension, so that a large fecal mass produces more discomfort when lodged in the rectum than in any other situation. As a result of this, the normal accumulation of feces in the pelvic colon is unaccompanied by any discomfort, whereas, the entry of feces into the rectum at once produces a sensation, which acts as a warning that defecation is necessary. The discomfort produced by the presence of a large mass of feces in the rectum is partly due to the pressure it exerts on the upper extremity of the sensitive anal canal. Prolonged retention of feces in the rectum leads to a blunting of its sensibility, so that comparatively little local discomfort is present in most cases of confirmed constipation. But in acute cases or cases of recent origin, in which the rectum is distended with feces, much discomfort and occasionally severe pain is experienced. On the other hand, even a very large accumulation in the pelvic colon produces little or no discomfort in the intestine itself.

A large fecal accumulation in the rectum presses directly upon the anterior primary divisions of the third, fourth and fifth sacral nerve routes, as they emerge from the sacral foramina. It may therefore lead to neuralgic pain referred to the sacrococcygeal region. It is liable to cause suffering more from its con-

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stant presence than its severity; it is often as severe when the patient lies down as when he takes exercise, but some relief follows flexion of the lumbar spine. The muscles of the buttocks and back of the thigh, which receive a small part of their sensory and motor supply from the third sacral nerve route, may be the seat of similar pain. Neuralgic pain or parasthesia, in the form of tingling or a sensation of heat or cold may occur in the course of the sciatic nerve, in the back of the thigh, and occasionally the sensation of cramp in the calf is produced. Pain is also occasionally felt in the hip-joint; it receives part of its nerve supply from the third sacral nerve. The roots which supply the muscles of the front of the thigh are situated out of reach of the distended rectum, so that, in the exceptional cases in which pain is produced by constipation in this situation, it must be due to pressure exerted by a fecal mass in the iliac colon on the anterior crural nerve, and is accordingly only observed on the left side.

That these neuralgic pains are probably due to the direct presence of a large and hard mass of feces on the sacral nerve-routes is shown by their instantaneous disappearance on completely evacuating the rectum by enemata, a form of treatment which was already advocated for sciatica by Columnius, of Naples, at the end of the eighteenth century.

Possibly the erections, seminal emissions, frequency of micturition and nocturnal incontinence, which occasionally results from large fecal accumulations in the rectum, are due to direct irritation of the third and fourth sacral nerves, and are not reflex in nature. The spasm of the sphincter ani and levator ani muscles, which has already been described as an occasional complication of the fecal impaction in the rectum, which occurs in constipation, may perhaps be in part due to pressure on the fourth sacral nerve routes.

Neuralgia of the testicles in men and dismenorrhea in women are sometimes increased by the direct pressure in the rectum on the nervous supply of the testicles and uterus respectively.—Arthur F. Hertz, on Constipation.

Bacteriology and Urinary Findings of Constipation.

By John L. Jelks, M.D., of Memphis, Tenn.

The author advances no new theories, but expresses his views of the importance of both chemical and microscopical investigation in connection with clinical proctology, and the value of these examinations in cases of atonic constipation.

He refers to the importance of either finding, or eliminating, the presence of intestinal parasites, that are known to produce lesions in the intestinal coats and ports of entry of bacteria, or their toxins. He expresses the belief that the destruction wrought to the submucous structures, the infiltration of plastic material and the contracting, distorting, scarred portion of the bowel, as also the consequent destruction of and interference with the secreting glands, their ducts and the nerve supply may become important factors in the atonic condition of some patients.

The author believes it is important to make microscopic examinations in all cases of this character—both of the crude and washed specimens—and of scrapings from the intestinal wall or from any lesion found in it. He also examines the urine chemically and microscopically, believing this important, owing to the relationship and association of diabetes, kidney insufficiency and diseases of the kidney with cases of atonic constipation.

These examinations of the urine aid in determining the proper course of treatment; especially is this true when indicanuria, casts and sometimes traces of albumen, indicate the vicarious overwork of the tired and irritated kidneys, as also the intertinal fermentations and coprostatic autointoxication, which results in some cases.

The author refers to the importance, also, of examination of the stomach contents after test meals have been given, as these may furnish, in some cases, a clue to etiologic factors.

Blood examinations he finds quite important in determining the amount of opsonic resistance, as also for finding infections in the blood, which matters by lowering the vitality may become factors in the atonic conditions which were being discussed.

Pathology and Diagnosis of Constipation.

By William M. Beach, M.D., of Pittsburgh, Pa.

Pathology of constipation is naturally considered under two general heads, namely:

1. Stasis due to altered secretions.
2. Stasis due to mechanical obstruction.

The first may be the result of neuroses, and acute fermentative indigestion or a bacillary infection. The anerobes may attack the contents of the bowel or the gut wall itself, leading to varying degrees of inflammation in the colon—as ulceration, hypertrophic and atrophic catarrh. The colon impaired, functionally or traumatically, leads to stasis and consecutive inhibition of the fecal excursion. Such impairment further disturbs the physiologic lines of defence against the auto-intoxications, as

(a) The intestinal mucosa, itself;
(b) The liver, and
(c) The antitoxic glands.

Collateral with these phenomena in constipation are such factors as cholelithiasis hypochlorhydria, cholangitis and appendicitis, as altered secretions incident to coprostasis.

Mechanical obstructions to be reckoned with include:

1. Entroptosis or Glenard's disease.
2. Gastroptosis.
3. Dilatation of the colon.
4. Certain extra-mural and intra-mural sources of obstruction—as pelvic tumors and displacements, nephroptosis, enlarged glands, intussusception, malignant disease, etc.
5. Acute angulation at the recto-sigmoid junction, hypertrophy of O'Beirne's sphincter, and stiff rectal valves.
6. Disease in the anal canal.

Diagnosis resolves itself into an analysis of the above conditions; to differentiate acute or chronic obstruction and the ordinary functional stasis which may also be accompanied by the various forms of colitis.

Sequelae of Constipation, Including Auto-intoxication.

By Alfred J. Zobel, M.D., of San Francisco, Cal.

In this paper the writer mentions many of those conditions which seem to have their origin in chronic constipation with auto-intoxication. He states that experimental evidence has not as yet

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demonstrated that they actually do so, but close observation and clinical experience tend strongly to confirm the theory.

He writes that while all constipated individuals do not necessarily suffer from those symptoms ascribed to auto-intoxication, yet in his experience most patients with autotoxic symptoms are constipated. This may be without their knowledge, and they often deny in good faith that they are so; but proctoscopic examination generally proves the sigmoid and rectum to be loaded with fecal matter.

A report is given of the proctoscopic observations made on a number of cases of hypertrophic arthritis. In almost every instance the lower bowel was filled with a fecal mass, although most of the patients positively stated that they had had an evacuation within an hour or two previous to the time of examination. Thorough colonic flushings invariably brought about relief from pain, and in time marked improvement in their general condition.

These observations are in line with the theory advanced by various authors that arthritis deformans may be due to intestinal auto-intoxication.

Mention is made of the various muscular, arthritic, and neuralgic pains caused by absorption of toxins from the bowel. These are often misunderstood, and treatment instituted for rheumatism.

Congestion, irritation and various disturbances, both functional and organic, of the uterus, tubes and ovaries in the female; the vesicles, urethra, and prostate in the male; and the bladder in both, may result from chronic constipation. This is due both to the proximity of these organs to the lower bowel and to their close physiological relationship.

It is noted that albuminuria may arise from intestinal stasis, and mention is made of the opinion advanced by various clinicians that a nephritis may even be caused thereby.

The role of constipation with auto-intoxication as casual factors of epilepsy, neurasthenia, and various mental conditions, as claimed by certain well-known and competent observers, is stated here without comment.

The influence of these conditions on the heart, blood-vessels, and the blood; and its effect on the eye, ear, nose and throat are dilated on in this paper and in support of these statements quotations are culled from the literature that has appeared on this subject during the past five years.

The writer further briefly mentions a few more of those conditions that are supposed to arise from chronic constipation with auto-intoxication, and concludes by agreeing with the trite observation of Boardman Reed, that, "when we except the exanthems, malaria, syphilis, tuberculosis, and the diseases caused by traumatisms, by metallic poisons, and by a few other toxic agents or infections from without, practically all the remaining maladies which afflict us and cut short our lives are now directly or indirectly traceable to auto-intoxication."

Non-Surgical Treatment of Constipation.

By Dwight H. Murray, M.D., of Syracuse, N. Y.

Dr. Murray stated that chronic constipation and its results was one of the worst of the foes to a healthful human race.

He had never known any medication to cure cases of constipation. As primary causes of all cases of constipation he considered *carelessness, ignorance* and *laziness* to be of first importance. The whole medical profession should teach their clientele how to care for themselves, and to train their children in order that constipation could be eliminated by educational and prophylactic methods.

Medicines for the use of constipated people have increased until their number is almost countless. Advertisements which extol particular cathartics exploited by this or that pharmacist are well nigh bewildering.

He makes the claim that all cathartics finally leave those who use them worse than before. He does not entirely interdict the use of drugs, as there are cases where they must be used, but almost wholly for temporary relief. He says that a mistaken notion exists in the minds of the laity that the feces is composed largely of debris of food. This, however, furnishes only a comparatively small portion of the fecal mass, the larger portion being deposited in the large intestine as the ash resulting from the products of metabolism.

He mentions various exercises, massage, deep breathing, climbing, rowing, electricity, etc., as being helpful in the treatment and cure of these cases.

Sigmoid injections of pure olive oil, castor oil or medicinal paraffin oil were recommended as aids in the treatment.

He said that hours could be spent over the various drugs and methods in detail; after it all we would be obliged to say that eternal vigilance as to regularity on the part of the patient must be exercised or a cure would not result.

The keynote of his paper is education and regularity as to periodicity of the first daily stool. Finally, he believed that the whole profession had a profound duty to perform for mankind in an educational way for emancipating the race from this insiduous foe.

The Surgical Treatment of Chronic Constipation.

By Louis J. Hirschman, M.D., of Detroit, Mich.

Constipation is divided into two great classes; the one class being due to a lack of functional activity, *i. e.*, dietetic error, improper habit, neural or trophic influences. The other class, which some of us have been pleased to designate as obstipation, includes all cases whose impaired activity is due to mechanical interference with the normal peristaltic movements and expulsive function of the bowel.

Obstipation, or obstructive constipation may be caused by:

(1) The presence of any foreign body, occlusion, contracture, hypertrophy or accumulation in the intestinal canal.

(2) Displacements, acute angulations, distensions, neoplasms, adhesions or compressions of the bowel.

(3) Developmental defects and congenital deviations from normal.

Inasmuch as the surgical treatment of constipation, due to easily recognized local conditions, is obvious, they are dismissed with mere mention. Coloptotic constipation represents such a large percentage of cases of mechanical constipation that its discussion involves the most important field of surgery in the treatment of constipation. All patients with ptotic colons are not constipated,

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nor do all constipated patients suffer from coloptosis. There must be in addition to ptosis of the cecum, transverse or sigmoidal colons, a condition of functional inactivity due to atony of the bowel muscle.

Suspensions of ptotic colons by means of fixation by adhesions to the abdominal wall are unnatural and interfere with peristaltis. Restoration should be accomplished by shortening the natural support—the mesentery. Lateral anastamoses between the most dependent loops of ptotic bowel is sometimes indicated. Above all, massage, both abdominal and internal rectal, is of primary importance in restoring function, and should be used along with either dietary or hygienic measures to restore bowel function.

Cancer of the Rectum.

By J. Rawson Pennington, M.D., of Chicago, Ill.

I take it we are all agreed as to the increasing frequency of cancer. At least it seems to me no other conclusion can be drawn from the following figures: According to the twelfth United States census, cancer appears to have increased 12.1 deaths per 100,000 population in the previous decade. In Great Britain, so we learn from the work of Roger Williams, the deaths from cancer increased from 177 per million in 1840 to 885 per million living in 1905. Williams points out that while the population barely doubled from 1850 to 1905, the mortality from cancer increased more than sixfold. Nor is the increase confined to the United States and Europe; it holds good for Japan, India, and even for uncivilized countries. In short, cancer is one of the several diseases which is apparently increasing, by leaps and bounds, in spite of our boasted progress in medicine, surgery and hygiene. Apart from the increased prevalence, the present death rate from malignant diseases is something dreadful to contemplate. Our anxiety in regard to malignant disease of the rectum is pardonable when we reflect that a good proportion of cancers involve this region. Williams found that 9.6 per cent. in males and 5.3 per cent. in females were located in the rectum. Is there anything that can be done to check this foe? The writer believes there is, and that this society may be made a powerful factor for good in such a crusade. In Germany a similar crusade has been started against cancer of the uterus by Winters, agitating the subject both among the profession and the laity, it is estimated that the number of cases of inoperable cancer of this organ has been reduced over 30 per cent. as a result of calling attention to the early symptoms. Of the 2,914 cases of rectal cancer in the male referred to by Williams, 2,592 patients were 45 years of age, and 2,180 of the 2,533 female patients. In the male sex again the average age, at which the onset was noted, was 49.7 years, the minimum being 16.75 and the maximum 74; while the female sex the average was 50.4 years, with a minimum of 21.8 and a maximum of 88 years. This brings me to the crux of my argument, that every person who has reached the so-called "cancerous age" should be examined periodically for evidence of commencing carcinoma, not necessarily of the rectum alone but in the female, for example, of the uterus also.

In 120 resections of the rectum for malignant disease, W. J. Mayo observes: "It is an unfortunate fact that, in the majority, cancer of the rectum is not recognized in time to obtain a radical cure." I said a moment ago that cancer in the beginning is a local disease. This granted, then early and thorough removal must lead to a cure. It has been shown that a large proportion of malignant growths originate in scar tissue. In cancer of the stomach, for example, the Mayos found that no less than 62 per cent. showed evidences of a previous ulcer. In rectal cancer patients frequently give a history of previous operations on the part. Does the cancer occur in the scar left from an operation for hemorrhoids done by one of the commoner methods—ligature, clamp and cautery, or some other technic leaving much scar tissue and sometimes stricture? May it not be occasionally engrafted on the scar following the usual incision method of operating for fistula? Here is a suggestion for us in our own work, secure smooth healing by resorting only to such procedures as leave the minimum of cicatricial tissue, hence the least possible nidus for possible mischief in the future. With the cooperation of the public it seems to me we should learn much about cancer in the early stages. To educate the public we must—as has been well said—"organize, systematize, deputize, energize, supervise and economize." The field is broad and the opportunity is at hand. Shall we grasp it?

Malformation of Rectum and Anus, With Report of Case.

By Donly C. Hawley, A.B., M.D., of Burlington, Vt.

The facts of modern embryology explain a majority, but not all developmental defects of the rectum and anus.

M. B., female, age 4 weeks, came under my observation in April, 1910. She had an imperforate anus, the rectum opening into the vagina in the upper half of the recto-vaginal septum, opening one-half by one-eighth inch in size, the longer diameter transverse, was evidently supplied with a sphinchter, as the child had three or four well-controlled movements daily. Anal depression was present and the vulva and vagina were normal, except as noted. The presence of uterus was normal or otherwise not demonstrated. There was no distension of rectum, no impulse and no prominence in perineum. The child was well nourished and otherwise normal. Operative interference postponed. The child is at present well, and is 13 months old and weighs 22 pounds.

While this defect is sometimes seen, many cases reported as atresia ani vaginalis are, no doubt, in reality imperforate anal canal with vulvar outlet, a malformation admittedly of common occurrence.

Cases in which intestine opens well up into the vagina are not accounted for on embryologic grounds, the two structures being embryologically dissimilar and independent.

Pruritus Ani, With Report of Cases.

By Donly C. Hawley, A.B., M.D., of Burlington, Vt.

In this discussion I do not refer to cases due to intestinal parasites, errors in diet, etc., in which the pruritus is relieved by proper attention to the causative condition, nor so much to the symptoms as to the pathologic condition of the skin and nerve endings, which condition is pathognomic.

The nearly constant local cause of pruritus

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ani is abrasion and ulceration of the anal canal, accompanied by blind sinuses underneath or fissures in the mucocutaneous lining.

Further, some cases are associated with chronic proctitis, which may be a factor in producing or increasing the anal abrasions or ulcerations.

The treatment I have adopted as follows:

With the patient well anesthetized, the anal canal is dilated, and the ulceration, together with the sinuses and fissures, are thoroughly cauterized with the Paquelin cautery, and also the entire area of chronic dermal inflammation.

My aim is to destroy ulcerated areas, the thickened and altered skin and the pathologic condition of the terminal nerve fibres.

Case I. S. H. E., aet. 62, came under my observation June, 1908. He had suffered with rectal trouble for 45 years. Twenty years ago he was operated on for fissure or fistula—was not certain which. He has had almost intolerable pruritus for eight years, and for the past year it has been so constant and unbearable, especially at night, that he has become a nervous wreck, and has lost 40 pounds in flesh and has been unable to continue his business.

Diagnosis: Chronic puritus ani. The skin was inflamed, soddened and thickened over a large area about the anus, with many deep cracks, and four or five ulcerations and abrasions in anal canal.

Treatment as outlined. Result, cure and no return up to present time.

Case II. W. A., male, aet. 38. History of pain in rectum for 20 years, and of severe and intolerable pruritus.

Diagnosis: Chronic pruritus ani.

There was a large ulceration in anal canal and three or four blind sinuses, with an area of white brittle and infiltrated skin with large cracks about anus.

Operation, same as in Case No. 1. Result, cure.

Other cases less severe have been operated upon during past three years, with satisfactory results.

The treatment outlined is not new nor original, having been advocated by Mr. W. Mitchell Banks, and practiced by Mr. Fred C. Wallis.

Bull's operation is designed to render anesthetic the skin over the undercut area.

The operation described accomplishes the same end and besides destroys lesions in anal canal.

The former operation has resulted in extensive sloughing. To the latter no such danger attaches.

Syphilis of the Ano-Rectal Region.

By Lewis H. Adler, Jr., M.D., of Philadelphia, Pa.

The author related the history of two cases of syphilis in which no outward visible effects of the patient's grave condition existed, except about the anus. In both instances, the anus was surrounded by syphilitic condylomata, the parts were bathed in a fetid sero-purulent discharge and the patients' mouths were affected with mucous patches. In one case the patient was markedly improved by the use of salvarsan, and the other one improved under the ordinary mercurial treatment, but disappeared from observation before a cure could be effected.

The writer then took up the consideration of the usual manifestations of the disease as affecting the localities under consideration, stating that the primary lesion—always a chancre—occurs about the anal region much more frequently than is usually supposed. That chancre of the rectum proper, in this country, is a very rare occurrence. Where sodomy and other unnatural vices are practiced, infection may and possibly does occur with greater frequency. That females are oftener affected than males, and, while the occurrence of the initial lesion about the anus or within the rectum of men is almost positive evidence of the practice of sodomy, in women the possibility should be remembered of the infection of these parts arising through contact with the male organ or from the vaginal discharges.

That the diagnosis of all doubtful cases of syphilis can now be definitely determined when the patient's blood shows a positive Wassermann reaction and by finding the presence of *sphirocheta pallida.*

Attention was called to the fact that cases of ano-rectal syphilis develop the usual symptoms of the disease as when it affects other parts of the body, and, next to the mouth and throat, the anus is the most frequent site for mucous patches.

Attention was called to the hereditary or congenital form of the disease, and, among the tertiary lesions, the following principal varieties were enumerated: Gummata; destructive ulceration; stricture; ano-rectal syphiloma; proliferating proctitis.

The article concluded with a brief consideration of the treatment of the disease in which attention was directed to the necessity of care being exercised in looking after the hygiene in all its phases; that the constitutional treatment of the disease should not be commenced until a positive diagnosis is established; that as no one form of mercury, or any one of the various methods of its administrations may be employed successfully in all cases, the individual requirements of each person should be the guide.

Ehrlich's remedy—salvarsan—had, in several instances, been employed with excellent results, but the author would not depend upon its employment alone, believing that mercury should supplement its use.

In the use of salvarsan it was advised that no one treat patients with it except those specially trained in its preparation and administration.

Foreign Bodies in the Rectum.

By T. L. Hazzard, M.D., of Pittsburgh, Pa.

The paper consisted mostly of a recital of four recent cases of foreign bodies in the rectum. Two were in children, in which the substances were accidentally swallowed, and the others were in adults who introduced the bodies directly into the rectum through some perversity:

Case I. Baby girl, two years old. Referred for dysentery of three months' duration. The chief symptoms being bloody stools, mucus and tenesmus. No digital or other local examination had previously been made. Examination with the little finger showed the presence of something lying across the bowel, low down. A guarded pair of scissors were introduced and this body was easily cut in half and removed. It proved to be a match, or at least nearly two-thirds of one. Although the ends of this match

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were firmly fixed in the sides of the intestines, no abscess followed. Recovery was rapid and uneventful.

Case II. Boy, a little older than the first case, The symptoms, condition and procedure were the same as the preceding case, but the foreign body was a bone from a frog's leg.

These cases show the necessity for rectal examinations. In one case a bacterial microscopical test had been made, but was rather misleading than otherwise.

Case III. Self-introduction into the rectum of a prescription bottle, a "Baltimore oval" 3 oz. The mouth was upward. After considerable trouble it was removed by means of a blunt hook. It had been in the bowel for three days. No anesthetic necessary. The case progressed without any untoward incident. He gave no reason for his action, and no questions were asked, as he would not have told the truth.

Case IV. Adult, aged 45. Had been a cowpuncher. At present has no occupation. Came to Allegheny General Hospital. Examination showed the presence of a very thin beer glass, 2 inches wide, at the top, and 3½ inches tall. Sphincters contracted. No bleeding and but little discomfort. In attempting to remove it, it was broken. After it was extracted there was considerable bleeding from the rectum. He developed pelvic peritonitis and a rather large tumor developed in the left iliac region. This passed away and he was discharged in about three weeks, not altogether well of the pelvic pains.

General treatment in all cases was rest in bed, with frequent washing of the bowel with a 1 per cent. solution of creoline and normal salt.

The Limitations of the Use and the Methods of Employing Local Anesthesia in Rectal Surgery.

By Lewis H. Adler, Jr., M.D., of Philadelphia, Pa.

The author, quoting from a recent article of a distinguished proctologist, states: "Patients seriously object to a general anesthetic, and, because of this and the fact that most minor ano-rectal operations can be painlessly performed under local anesthesia induced by sterile water, or a one-eighth of one per cent. eucaine solution, I have discarded general narcosis in about eighty per cent. of my rectal operations."

In taking exception to this general statement he questions the wisdom of sending it broadcast and advocating a method which in the hands of one not particularly skilled in rectal work would, in his opinion, only lead to disaster.

He calls attention to the water-logging of the tissues, when sufficient anesthetic be used, whether cocaine, eucaine, sterile water, or other agents, and to the subsequent retarding of the recovery of the patient and the danger of hemorrhage from allowing patients to be about on their feet, citing a case which proved conclusively the force of his arguments.

The author claimed that a thorough understanding of the underlying conditions can rarely be made without the aid of general anesthesia. The latter, when administered by a competent anesthetizer, is not attended with any more danger or risk than the indiscriminate employment of local anesthesia.

He calls attention to the fact that it is essential to remove the anesthetic when the sphincter is divulsed, as deep inspiration thus induced would cause too much of the drug to be inhaled suddenly, and might cause alarming or fatal results.

Rectal diseases which may be treated under local anesthesia he considers under two divisions: (1) Those admitting of office treatment; (2) those requiring treatment at home or in a hospital.

In the opinion of the author, external piles or other excrescenses around the anal region, some fissures-in-ano, and abscesses (of not too large an extent), are the only affections coming within the range of operations which can with propriety be performed in the office under local anesthesia. He warns the operator that trivial fistula often have diverticulæ and are not readily discoverable except under general anesthesia.

Under the second heading he speaks of internal colostomy and internal hemorrhoids and warns the operator that the temperament of the patient must always be taken into account. Highly nervous patients will not stand manipulation of the intestines, and the abdominal muscles are apt to be rigid.

The author mentions the different drugs used in local anesthesia, the vibratory method of Hirschman, the methods used in getting the parts anesthetized and the after-treatment.

The trend of the article is not to throw cold water on the valuable procedure of local anesthesia, but to insist that the cases must be suitable and in the hands of men of experience.

Officers elected for the ensuing year:

President, John L. Jelks, M.D., Memphis, Tenn.

Vice-President, Alfred J. Zobel, M.D., San Francisco, Cal.

Secretary-Treasurer, Lewis H. Adler, Jr., M.D., 1610 Arch street, Philadelphia, Pa.

The next meeting will be held in Atlantic City, N. J., early in June, 1912.

Tonic After Influenza.

O. H. Wilson finds the following tonic a valuable aid during convalescence from influenza:

Strychninæ sulphatis	
Arsenii trioxidi	aa gr. ss
Pulv. digitalis	gr. viij
Quininæ hydrochloridi	gr. xxx
Ferri reducti	gr. vj
Extracti gentianæ	gr. xxx

M. et pone in capsules No. xxx.

Sig.: One capsule three times a day after food.

—*Medical Fortnightly.*

Vertigo usually has its origin in irritation of the brain and cord. Persons subject to attacks are sensitive to drugs which, in excessive doses, produce this state. Therefore, be careful to give to such patients only small doses of the following: arsenic columbo, gold, guaiac, iron, quinine, salicylates, strychnia, turpentine, acetanilid, aconite, belladonna, chloral, cocaine, ergot, ether, exalgin, gelsemium, nitroglycerin, musk, opiates, phenacetin, physostigma, valerian, veratrum, aloes, ammonium chloride, copaiba, ipecac, jaborandi male fern, potassium chlorate, santonin or tartar emetic.

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BOOK REVIEWS

One Hundred Surgical Problems. By James G. Mumford, M.D., instructor in surgery, Harvard Medical School, Boston, Mass. 354 pages, illustrated; cloth. $3.00. Published by W. M. Leonard, Boston.

We cannot give too high praise to this book as a valuable aid to one who is a practician (and hence by necessity a constant student) of surgery. This method of case-teaching is at once interesting and impressive, and the facts and principles one learns by this method are not soon forgotten.

This book consists of a plain, concise history of one hundred cases in the author's practice, just as they come in the ordinary run of work, covering a considerable portion of the field of surgery. They are narrated with a view to bringing out the salient points and leading to a logical diagnosis, with consequent treatment and results. By reading it you can attend a post-graduate course, so far as the ground covered by these go, without leaving your office.

This book does not by any means pretend to the dignity of a complete text-book on surgery. It is better than that—it is a book which develops thought and originality and we hope to see it followed at a future time by another of the same author covering surgical subjects not touched in this one.

A Manual of Surgery. By Francis T. Stewart, M.D., professor of Clinical Surgery, Jefferson Medical College, Philadelphia. 682 pages, 553 illustrations, cloth. $4.00 net. P. Blakiston's Son & Co., Philadelphia.

This book fulfills its aim—that of a work for a student or practician who needs a concise review of the essential facts of surgery. It is well written, is very much condensed, and covers in a brief way about the entire field of surgery.

However, we cannot commend a book of this kind to our readers. They will find it difficult to follow in their surgical work. In such a short compass not enough of the working detail can be given to enable one to depend upon it, either for reading up a case or for a guide in the operating room.

We hope the author will some time give to the profession (as his acknowledged ability will easily allow him to do) a work on some particular subject in surgery which will permit some original work, with detail enough to make it an authority on the subject.

Ionic Surgery in the Treatment of Cancer, with a chapter on Ionization in Surgical Tuberculosis and Hemorrhoids. By G. Betton Massey, M.D., Attending Surgeon to the American Oncologic Hospital, author of "Conservative Gynecology and Electro-Therapeutics," etc. Philadelphia. 232 pages; 82 illustrations; cloth. Price $3.00. Published by A. L. Chatterton Company, New York.

It is with great pleasure that we welcome such books as this—and this one in particular—to the vast accumulation of medical literature. Dr. Massey, the originator of this method of treatment, has practically made it his lifework, patiently experimenting and improving the technic from time to time, and carefully explaining it to his fellow physicians whenever opportunity offered—in private conversation, in clinics, and in medical societies. At first received with skepticism and sometimes even with scant courtesy, Dr. Massey has lived to see the triumph of his ideas and the complete establishment of a successful method of treatment with which his name will always be identified.

In this book the author modestly tells the profession about this method of treatment, giving a description of the required apparatus, details of application, shows the difficulties that must be overcome in undertaking it, and gives a brief report of all the cases he has treated, with results as they occurred, both favorable and unfavorable.

Ionic surgery in cancer may be briefly defined as a method of destroying cancerous tissue and sterilizing the site of the lesion by the electrically diffused ions of zinc and mercury. Its application, while not easy, may be mastered by any one possessing good surgical skill and a competent knowledge of electric apparatus. Every reader who gives any attention to malignant growths should have this work. Also, any one making a trip to our eastern medical centers should not fail to see Massey's work. He obtains results, as is well known by any one familiar with the work at the American Oncologic Hospital, Thirty-third street and Powelton avenue, Philadelphia.

Hieronymus Fracastor's Syphilis, from the Original Latin. A translation in prose of Fracastor's immortal poem. Printed on hand-made imported paper; library binding; crown octavo. The Philmar Company, Medical Publishers, Fidelity Building, St. Louis, Mo. Price $2.00.

This is a prose English translation of the poem entitled *"Syphilis sive Morbus Gallicus,"* written by Hieronymus Fracastor, a Venetian poet and scholar, in 1530. It gives the first use of the name, syphilis, the supposed origin of the use of mercury, and all in the form of a halfway mythological poem, after the literary style of that time. The physician will find it very interesting reading.

Local Pain is relieved by application to the unbroken skin of the following: two drams each of chloral, camphor and chloroform rubbed together in a mortar until solution is complete, when five grains morphine sulphate are added.

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THE

Medical Council

A MONTHLY JOURNAL FOR THE PHYSICIAN AND SURGEON.

"WE FIND WISDOM AND STRENGTH IN COUNCIL."

J. J. TAYLOR, M.D. Editor and Publisher | PHILADELPHIA, PA. | 4105 Walnut Street

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The Employment of Antiformin in the Routine Examination of Sputum for Tubercle Bacilli.

The efficiency engineer is in the field these days, and any agent which will increase the reliability of such a beneficial laboratory test as the finding of the tubercle bacilli in the sputum is most welcome. Naturally, the larger the number of smears examined and the longer the time spent over the microscope in studying the stained specimens, the more frequently will the tubercle bacilli be demonstrable, other conditions being the same. Goerres well illustrated this by his examination of four smears from 296 specimens suspected of containing these organisms; 96 were shown to contain tubercle bacilli by the first smear, 24 more by the second, 9 additional ones by the third, and five more by the fourth smear. And now comes the good results from the use of antiformin: of the remaining 162 specimens apparently negative in character, 28, or 17.28 per cent., were shown to contain tubercle bacilli by the employment of this reagent.

Antiformin is a clear yellowish liquid of high specific gravity, employed in Germany for the purpose of disinfecting the apparatus used in the manufacture of beer, and, according to Uhlenhuth, of Berlin, is composed of sodium hydrate, 7.5 per cent., with sodium hypochlorite in such amounts that 100 grams of antiformin will give rise to 5.3 grams of chlorine gas. This naturally makes one think of Labarraque's solution, but this does not seem to work as well as does antiformin. As soon as the antiformin is added to the sputum, there is a marked liberation of gas, just as when the strong acids, like nitric acid, are employed under similar conditions. It is the flocculent precipitate that will contain the tubercle bacilli if any were present in the original specimen. This sediment may be collected by centrifugation or by sedimentation.

Dr. W. W. Boardman,[1] of Baltimore, uses the antiformin in the following manner:

1. Place the entire 24 hours' sputum in a conical settling glass; if the amount is excessive it is perhaps better to use only 15 to 20 cubic centimetres.

2. If the specimen is thick, add an equal volume of distilled water, care being taken that the water does not contain acid-fast organisms. Less tenacious specimens do not require so much water for the purpose of dilution.

3. Add an amount of antiformin equal to one-fourth the volume of the diluted sputum. In other words, sufficient to make a 20 per cent. solution.

4. Stir thoroughly, thereby breaking up the masses of mucus and greatly hastening complete solution.

[1] *Johns Hopkins Hospital Bulletin.* July, 1911.

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5. Allow to stand until solution appears to be homogeneous. It should now be watery in consistence and pale yellow in color; if necessary more water or more antiformin should be added and digestion be allowed to be continued. This will usually require from a few minutes to an hour, but may be allowed to continued for days with no resulting harm to the tubercle bacilli.

6. Add an equal volume of 95 per cent. alcohol. By this procedure the specific gravity is reduced from 1030 to below 1000; thereby not only hastening sedimentation, but making it more complete.

7. After stirring, allow to stand until sedimentation is complete. This will occur in 2 to 4 hours, but a period of 12 to 24 hours is recommended. During this sedimentation it may be necessary gently to turn the vessel to dislodge little particles of sediment which may be adhering to the sides of the vessel. The use of centrifuge will shorten the time element, but adds to the difficulty of its method.

8. Pour off this supernatant fluid.

9. Make a smear from this sediment on a glass slide, using some of the original sputum to aid in fixing the smear. This is best done by making a smear from the sputum before antiformin is added and afterwards spreading the sediment from the sputum-antiformin mixture on the same slide.

10. The slide is then stained and examined in the usual way.

Which are the Five Most Practical Medical Books of To-day?

Much interest has been taken in the editorial of last month on "Medical Books of the Present Day," and it would be helpful to those about to purchase additional books for their libraries if a list of the five books which have most aided the reader in the actual practice of medicine was placed on a postal card and forwarded to the editorial office of THE MEDICAL COUNCIL, so that the replies secured might be tabulated and published in a subsequent issue of this journal.

The Treatment of Constipation.

The importance of constipation to the practician is well emphasized by the fact that at the recent meeting of the American Protologic Society[1] the subject of constipation was treated from no less than seven different standpoints. The employment of vaccines and bacterial agents in combating this all too common, and usually unwarranted, condition of an abnormal delay to the passage of the intestinal contents from the cecum, to and through the anus, is of extreme interest. The normal accumulation of feces in the pelvic colon is unaccompanied by any discomfort, whereas the entry of feces into the rectum immediately produces a sensation, which acts as a warning that defecation is to be performed. It is the lack of paying attention to this signal that is the great cause of constipation, and if the signal is not heeded the system quickly adapts itself to holding even large fecal accumulations in the rectum. Hence, regularity of time for defecation is the first essential point in the treatment of constipation.

From a study of the conditions producing constipation, it will, therefore, be seen that unless actual disease exists, at times only capable of removal by a competent surgeon, it is usually the fault of the individual that constipation is produced, and that medicines are usually worse than useless, except for temporary relief. Fortunately, however, various forms of exercise, such as deep breathing and massage, will usually supply the desired relief if intelligently and regularly employed.

To treat constipation successfully when hygienic and dietetic means have failed, a study of the intestinal flora is required, for diarrhea, with its resultant formation of toxines, the so-called autointoxication, may give rise to a condition which seems to be most successfully combatted by the use of living organisms or by their vaccines, and it is the increased virulence of the Bacillus

[1]See last number of THE MEDICAL COUNCIL, in which these articles are fully elaborated.

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coli, a normal inhabitant of the intestinal tract with which we have to deal. Even Metchnikoff admits that the beneficial result sometimes seen from the use of the Bacillus bulgaricus, the lactic acid organism of sour milk, is due to the fact that their growth in the intestinal tract renders the food less available for harmful bacteria, thus preventing the formation of injurious products which, when absorbed into the system, may give rise to arteriosclerosis and many other morbid conditions.

Fenton B. Turck, of Chicago, believes (*International Clinics*, June, 1911,) that the common colon bacillus is fundamentally and primarily a pathogenic micro-organism of great virulence, and that a large proportion of diseases—both medical and surgical—are the result of an increased degree of virulence of the Bacillus coli in the alimentary tract, combined with a lowered resistance or deficiency in the antibodies or in the fluids and tissues of the body. To reduce the virulence of the colon bacillus, autogenous vaccines are required to create and increase the antibodies, aided by the physical mechanical treatment and general hygiene of fresh air, baths, and physical exercise. Paradoxical as it may seem, the best treatment of constipation is often the proper treatment of diarrhea, which may be done by the intelligent use of autogenous vaccines. These are prepared by Turck, not by growing the attenuated organisms of the feces, but by removal of the accumulations from the lower bowel, and the obtaining of cultures from the ileum or colon. Smaller and more frequently repeated doses of the vaccines are used in acute conditions than when they have become chronic, varying from 25,000,000 every three or four days to 1,000,000,000 about ten days apart. It is not necessary to use the opsonic index, the change in the clinical symptoms with its reactions, together with the virulency of cultures of the B. coli obtained from the cecum are used as the therapeutic guide. Serum treatment from immunized animals may also be employed.

Scarlet Red as a Therapeutic Agent.

Scarlet red, a well-known dyestuff, has during the past few years gained considerable reputation as a therapeutic agent. It was discovered in 1882 as an aniline dye having brilliant scarlet staining properties, and, in 1900, Michaelis announced its value as a histological stain for fat. Since that time it has been much used for staining sections of cellular tissue for microscopic study. Its therapeutic action did not become known, however, until 1906, when Fischer, of Bonn, published an article in the *Münchner medicin. Wochenschrift*, in which he stated that subcutaneous injections of scarlet red produced a stimulation of epitheleal cells with proliferation and tumor formation, which gradually disappeared after the injections were discontinued.

Subsequently a number of investigators confirmed his observations and also found a like proliferation of the cells of mucous membranes. Hemholz, in 1907, produced experimental tumors of the mouth and rectum as well as of the skin. The growths resembled carcinoma, but the cylindrical cells differed from the constant character of the carcinoma cell by changing from a cylindrical to a squamous type, or the reverse according to their situation in a mass of living albumin.

These experimental observations suggested the use of scarlet red as a stimulant for old wounds or ulcers which have not healed, either because of extensive destruction of epithelium or owing to a sluggish condition of the tissue, and for the past few years its clinical value has been quite thoroughly tested, as shown by the number of articles written upon this subject and by the amount of scarlet red sold.

In the meantime, a series of dyestuffs bearing the general name of scarlet red have been placed upon the market. Fischer used a preparation known commercially as oil scarlet, but later Biebrich Scarlet, Soudan I and the other Soudan preparations and Scarlet R were also used clinically. Ointments containing from 2 to 20 per

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cent., the amount varying according to the degree of irritation desired, are generally used.

Schmieden, who was the first to use this agent, prepared an 8 per cent. ointment. On account of its irritating properties he changed to a bland ointment every twenty-four hours. He claimed that scarlet red has no effect unless the granulating tissue is clean and flat, but many more recent authorities have noted excellent results following its use upon unhealthy granulating tissue and purulent ulcers.

Krajca, in 1908, began using scarlet red with Thiersch grafts. The edges of the graft, as well as the edges of the ulcer, are favorably stimulated. Most of the long-standing conditions have been treated with this remedy with apparent success. Varicose leg ulcers, X-ray and other burn ulcers, tympanic membrane perforations, syphilitic, tubercular and corneal ulcers, have been treated by many physicians. Unfavorable reports seem to be confined to the use of scarlet red in aural cases.

Davis (in an article published in the *Johns Hopkins Hospital Bulletin*, of July, 1911, completing one published in 1910) gives a concise account of the literature upon this subject and the results following treatment. His own results, noted in a large number of cases, show almost uniform success. The wound heals rapidly and the new skin is normal and resistant. There is no tendency to retraction and the skin is soon movable on the underlying tissues. He prevents irritation of the skin around the ulcer by the application of a bland ointment and then applies the scarlet red ointment to the wound upon old perforated linen. Severe irritation of the wound with considerable pain followed the application in several of his cases. A number showed that the scarlet red was absorbed and excreted by the kidneys. The urine became a bright scarlet, but it was not increased in quantity or changed with regard to its constituents.

Constant Occurrence of Mixed Infections.

Some seven years ago the Medical Examiners' Board of the State of Pennsylvania asked this question of those desiring to obtain a license: "What is symbiosis?" One of those present came to the writer in order to inquire its meaning, stating that none of those present at the examination, or his professor of pathology at the University at which he had graduated, knew of its meaning. To-day there is no problem in pathology so interesting as the mutually advantageous association of two or more organisms for their own especial end, though this may be of distinct disadvantage to a third party, for, as Cobbold has well said, the Tænia lata must look upon man as if made solely for its own use. Dr. W. Hanna Thomson,[1] of New York City, has done good service in calling attention to the constant occurrence of mixed infections, the first invasion being rendered fatal, not by this organism, but by a secondary microbe gaining access to the body through its aid. Thus, in smallpox, there are two, or even three, wholly separate infections. First, the causative agent, which has not yet been isolated, then the myriads of cocci, usually the Staphylococcus pyogenes aureus, or in hemorrhagic smallpox the much more deadly streptococcic infection producing a severe streptococcemia from which so few ever recover. To combat this invasion Dr. Thomson advises the painting of the face and hands with a saturated solution of the nitrate of silver, or with Lawrence Smith's solution of bromine. Mixed infections are the rule in the inflammatory affections of the respiratory passages in children, whether this be diphtheria, or an ordinary bronchitis. The chief aim of the practising physician would, therefore, seem to be to prevent the primary infection from becoming multiple, by this means even rendering that dread disease, tuberculosis, a comparatively mild affection.

[1] *Medical Record*, July 22, 1911.

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Bad Results from the Use of Paraffin Injections.

Dr. Robert Abbe* recently presented to the Practitioners' Society of New York City a woman who had suffered in early youth a hemiatrophy of the lower jaw, with a depressed cicatrix on one side, due to bone necrosis following caries of the molar teeth. To remedy these defects, a competent surgeon injected paraffin on both sides with satisfactory results from every point of view for over two years. But then the paraffin began to settle into the chin, not only causing disfigurement, but giving rise to a dark color to the skin. As connective tissue had by this time infiltrated the paraffin, it did not seem practicable to raise the temperature sufficient to remodel it into better shape. Other cases were also cited where after the lapse of time the paraffin, as it neared the surface, had given disfiguring yellowish bands, in some cases producing such unsightly marks as to cause the person so afflicted to give up society because of this deformity. It would, therefore, seem that Gersuny's method of the subcutaneous injection of melted paraffin as a prosthetic measure on the face would have to be used with the greatest caution. Of course the yellowish discoloration following injections for the cure of hernia would make no difference, as these parts would be covered by the clothes.

*_Medical Record_, June 24, 1911.

The Control of Strychnine Poisoning by Means of Intratracheal Insufflation and Ether.

As asphyxia is the usual cause of death in strychnine poisoning, Githens[1] and Meltzer, of the Rockefeller Institute, New York City, believe from, their experimental experience on animals that ether anesthesia, intratracheal insufflation and intravenous infusion of Ringer's solution will afford an available means of treatment of strychnine poisoning.

[1] _Journal of Pharmacology and Experimental Therpeutics_, March, 1911.

Flies.

The great insect hunt, that we predicted many years ago as likely to develop in the future when Africa was denuded of game by so many retired officials, has actually occurred. The hunting of flies is now, in many parts of our favored land, not only a legitimate but a profitable amusement Even fly-killing contests are in vogue, under the auspices of Sunday schools, the children killing the most flies getting the prize. The numbers of flies caught staggers the imagination. One child, in a contest of this kind, in Greenheaderville, Atlantic County, New Jersey, won a beautiful colored picture of our President, elegantly framed, and five dollars in cash, by collecting 1,985,000 flies, beating his competitors whose highest record was only 1,889,000. This kind of competition is a valuable substitute for baseball and running races; it puts less strain on the growing body, can be carried on in the house and on rainy days, teaches practical mathematics as well as wet and dry measure, as they seem to have estimated their catch in pints and quarts as the accurate count. These flies are caught in the crusade against the fly as a dangerous insect, always spreading disease. It has been told us that every fly carries on its dirty little feet, about, as a low estimate, 83,000,000 germs of various kinds, and if we should multiply these 83,000,000 germs that each fly carries by the 1,889,000 flies caught by even one of the competitors—to say nothing of all the others—we arrive at the astonishing number of 156,587,000,000,000 germs, which are necessarily handled by these children in these contests. How many of these poor children are already dead we do not know, but is it not about time for the health authorities to interfere? It seems a shame that children of tender years should be allowed to run such risks merely to help some young man to get his name before the public in connection with the fly-crusade, which, since the collapse of the tuberculosis crusade, as a notoriety winner, has taken its place to some extent.

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THERAPEUTIC SUGGESTIONS.

Effects of Hashisch Not Due to Cannabis Indica.

Dr. M. V. Ball, of Warren, Pa., has not found a record of cannabis indica producing a drug habit among the Anglo-Saxons, while volumes have been written about the hashisch eaters of Persia, Arabia, India, and Egypt. But in the Indian preparations cannabis indica is never used alone, but always in a mixture, whether smoked, under the name of "Ganja" or "charus," or drunk as "Bhang," or eaten in a confection as "Madjoun." It seems to Dr. Ball that all the symptoms ascribed to the use of cannabis indica may be explained by the admixtures ordinarily contained in the hemp preparations, and that the descriptions of delirium and fantastic dreams are of the same nature as found after the use of hyoscyamus and opium.

A New Treatment for Aneurism.

In the older methods of treating aneurism sufficient attention has not been paid to the establishment of collateral circulation. A preliminary report of some experimental work instituted with special reference to this provision was made by Neff before the Surgical Section, A.M.A., at Los Angeles. The device consists of a hinge-like clamp, which includes the vessel at the desired site, with a bundle of plain catgut interposed between the free ends of the clamp. A rubber band is placed over the end of the clamp, which includes the catgut, and sufficient pressure is induced to retain the dressing in situ and ultimately, with the absorption of the catgut, completely occlude the lumen of the artery. Catgut is absorbed in from twenty to thirty days, seemingly ample time for the establishment of collateral circulation. Numerous lantern slides, illustrating the gradual obliterating process, were shown, the first hours, then days and weeks after the operation, and the final result.—*Lancet-Clinic*, July 29, 1911.

Spengler's Tuberculosis Immune Blood ("I. K.").

This transparent solution is prepared from the blood of artificially immunized sheep or rabbits, so that one cubic centimetre equals one million antitoxilytic units. Dr. Cranville N. Ryan, of Des Moines, uses for the first injection one-tenth cubic centimetre of the original solution and nine-tenths cubic centimetre of a slightly alkalized carbol-sodium chloride solution, six to fourteen days being permitted to pass between the administration of the constantly increasing dose until one cubic centimetre of the original "I. K." solution is injected. This maximal dose may be continued for a time, and the treatment tapered off retrogressively. The remedy may be also used by inunction, and while the action is not so rapid, is to be preferred in children. The patient during treatment may follow his daily avocation, and other lines of therapy may be employed at the same time.—*Medical Herald*, August, 1911.

Hexamethylenamine in Colds.

An early cold may frequently be successfully treated by 15-grain doses of hexamethylenamin, four times a day, copious water drinking being advised to lessen the possible irritating effect of this drug on the bladder. — *Journal American Medical Association*, June 10, 1911.

A Method of Following a Fistulous Tract.

Dr. Jerome M. Lynch injects a mixture of equal parts of a saturated solution of methylene blue and of hydrogen peroxide into a fistulous tract in order to follow out its ramifications. The hydrogen peroxide seems to penetrate into its remotest recesses, carrying with it its blue stain. —*Medical Record*, June 3, 1911.

Selected List of Formulae.

Furnished by
DR. WILLIAM GUILFOYL,
PHILADELPHIA.

In using calomel I find that a small dose of podophyllin helps a great deal in certain cases.

℞ Calomel, gr. ½.
Sodii bicarb., gr. i.
Podophylli, gr. 1-12.
In each tablet.
Sig: One tablet and repeat in half hour: follow by saline following morning.

Tonic for tubercular patient:

℞ Essence pepsin, ʒiii.
Pancreatini, ʒi ss.
Spts. glonoini, ♏i.
Tinct. nucis vomicæ, ʒv.
Liq. potass. arsenitis, ʒi.
Elix. calisaya g. s. ad., ʒvi.
M. Sig.: ʒi in water iid., after meals.

or,

℞ Pepsin, ʒiii.
Ac. hydrochlorici, dil.
Ac. phosph., dil., aa. ʒii.
Strych. phos., gr. i.
Liq. potass. arsenitis, ʒi.
Elix. calisaya, ʒvi.
Sig.: ʒi in water, t. d., after meals.

Spray for use in cases of *inflammation of frontal sinus:*

℞ Sol. andrenalin chlor. (1-1000), ʒi.
Liq. alkalin. antiseptic., ʒii ss.
Sodii chloridi, gr. xv.
Aquæ, q. s., ʒiv.
Sig.: Spray nose every three hours.

Acne, along with saline purge and correction of diet and habits.

℞ Sodii hyposulphite, ʒss.
Glycerine.
Aq. menthæ pip., aa., ʒiii.
Sig.: ʒi or ʒii, ii d.. after meals.
Locally:
℞ Sulphate zinc.
Sulphuret of potassium, aa., gr. x.
Aq. hamamilidis, ʒi.
Sig.: Mop on face; if this makes skin scaly, add glycerine xx to each ʒi of mixture. Increase ingredients up to gr. xx gradually, and later add 3 ss. sol. adrenalin (1-1000) to each ʒi of the above mixture.

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Original Articles

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Sentences, like sunbeams, burn deepest when most condensed.

Cultivation of Tissue Cells Outside of the Body.

By PROF. ADELAIDE W. PECKHAM,
PHILADELPHIA, PA.

The study of cellular physiology has received a great impetus within the past few years through the successful cultivation of mammalian tissue cells. The methods are so perfected that there is no more difficulty in growing tissue cells than in the cultivation of some bacteria. Our theories of cancer and sarcoma may be modified as much by this discovery as those of bacterial diseases were by the cultivation and isolation of bacteria in pure cultures. Indeed, this work has already been the means of broadening our views of some of the questions relating to immunity in cancer.

It is interesting to follow the different steps in these investigations from the beginning. Harrison, who made the first successful effort in this line, published his results and methods in 1907 in an article, entitled "Observations on Living, Developing Nerve Fibres." He cultivated certain tissues of frog embryos in the following manner: The central nervous system, myotonies and skin of these frog embroyos were inoculated into a drop of lymph taken from an adult frog and placed in a hollow slide. He considered lymph a good medium because it contains a loose fibrin network which provides a supporting framework to which the cells become attached, and so are able to retain their tension. Fluid preparations, such as physiological salt solution, did not favor growth.

In these lymph cultures he observed the growth of axis-cylinder processes of nerves and the differentiation of striated embryonic muscle cells.

Later Burrows modified Harrison's method by substituting blood plasma for lymph, its advantages being that it contains a more uniform amount of fibrin network and is much more abundant. His observations extended to the tissues of warm-blooded animals beginning with chick embryos. His technique was about the same as that of Harrison. He put a fragment of a chick embryo into a drop of fresh, uncoagulated plasma obtained from a chicken and placed on a cover glass; he then inverted the cover glass over a hollow slide and sealed it. The preparation was incubated at 39° C. The blood was taken from the carotid artery of an adult chicken and the plasma used was not over six days old. The chick embryo was sixty hours old, and the fragments used consisted of neural tubes, heart myotonies and skin.

These cultures showed good growth. The most actively growing elements were the interstitial connective tissue cells which, in from two to twelve hours after incubation, showed both new single cells and layers of cells. The growth continued from six to fourteen days. Mitotic figures were abundant in the proliferated cells. The muscular elements, in short chains of striated cells, grew much less frequently. There were also outgrowths of the nerve cells, long axis-cylinder processes.

Further investigation was then taken up by Carrel and Burrows, who applied the same method to the cultivation of adult mammalian tissues. They used tissues from dogs, cats and frogs; extirpated fragments of tissue and placed them in a plasmatic medium, obtained from the same animal. The cultures were kept on the stage of a microscope, which was kept in a temperature of 37° C., so the multiplication of cells could be directly seen. The first appearance of growth is the appearance of small granulations either on the edges or surface of the fragment of tissue. The cytoplasm of the new cell is first seen, then the nucleus and nucleoli. Long, slender, spindle cells, derived probably from the connective tissue fragments, are first seen. They radiate from the tissue through the plasmatic medium. Later multipolar cells apear, which vary according to the tissue or organ inoculated. For instance, in renal cultures, tubes formed of epithelial-like cells and having the appearance of renal tubules, may be seen passing out from the tissue into the medium.

Most tissues, such as bone, cartilage, skin, thyroid and other glands, kidney, ovary and lymph gland were successfully cultivated. Some of them developed in something like a normal manner.

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Cultivation of thyroid gland in series was also successful. Six or seven day old cultures were removed from the plasma, cut up into minute pieces, and placed in a fresh medium. In eleven or twelve hours new cells bordered the edges of pieces of tissue that had before been inactive, and a specimen, stained after thirty-six hours growth, showed a mass of fusiform cells at one point, and from another part several tubular formations extended. From this experiment they inferred that the vegetative power of the thyroid cells is increased by passage from one medium into another of the same kind.

A second generation of the first culture of thyroid cells was also produced by a reinoculation into a fresh plasma.

Later these investigators announced their success in cultivating a very malignant sarcoma. This tumor was that of an actively growing foul sarcoma obtained from Peyton Rou, and described by him as the first avian tumor found to be transmissable. He attributes this property to tissue specificity, as the fowls inoculated were closely related. This tissue had been propagated from generation to generation for more than a year.

Carrel and Burrows made four series of cultures, using fragments of tissue extirpated from the fowl in four different operations. These tissues grew luxuriantly, and with great rapidity. The latent period was much shorter than that of the normal tissues cultivated. One culture showed at the end of twenty-four hours a surface of new tissue fourteen times that of the original fragment, and in seventy-two hours it was twenty-two times as large. The old fragment decreased somewhat in size because the cells wandered out into the plasma, as they had been observed to do in cultures of normal tissues.

They found that there were other factors in the plasma aside from the stroma networks that influenced the growth. Plasma from a normal fowl was decidedly unfavorable and gave only two positive results in seven cultures, while plasma from the fowl from which the tumor had been taken gave six positive results in six experiments. A second generation also grew.

Lambert and Haines have cultivated a spindle-cell rat sarcoma and a mixed-cell mouse sarcoma *in vitro*. They obtained growths in from seventy to ninety per cent. of their preparations. They found that plasma from normal, young rats made as good a culture medium for these sarcoma as that from animals having the tumors.

Carrel and Burrows, in a fourth article, give results obtained from a study of the effect of different plasmas on the growth of certain tissues.

Rous' fowl sarcoma cells, cultivated in a plasma taken from the fowl having that sarcoma, grew very luxuriantly. If grown in a plasma from a normal fowl the growth was much less extensive, but if inoculated into a plasma derived from another sarcomatous animal the cells grew little or not at all.

From these experiments they concluded that the plasma of a sarcomatous animal acquires the property of inhibiting the growth of a sarcoma taken from another animal. They were led to ask themselves, "Is this inhibiting substance secreted by the tumor or is it produced by the organism as a reaction against a tumor."

To determine this point they added a serous extract of sarcoma to cultures of sarcoma cells in normal plasma. They found that the growth is markedly accelerated. It would appear that the inhibition is not due to substances secreted by the tumor, so probably it is brought about by substances produced by the organism. The comparative action of normal and sarcomatous plasmas was also studied.

The results following these experiments showed that normal spleen varied in its rate of growth, sometimes growing the same in normal and sarcomatous plasma, but very often it grew more quickly and extensively in the latter. The plasma from an animal having a large, old tumor was found to be much more stimulating than that from one having a small, recent tumor.

They then tried to modify the action of normal plasma by adding a little sarcomatous extract. Spleen tissue grew much more quickly and extensively under its stimulating effect, and embryonal spleen showed an enormous acceleration of growth. From these results they inferred that the stimulating influence of the sarcomatous plasma may be due to a substance produced by the tumor cells and which is analogous to sarcoma extract.

Other tissue extracts added to normal plasma were found to stimulate growth, but the sarcomatous extract had a much more energetic stimulating power.

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Have We a Specific for Typhoid Fever?

By G. W. Hosmer, M.D.,
Summit, N. J.

Fifty years ago, if a man was rash enough to say that he had cured a case of typhoid fever, the answer was: "If you have cured anything, the fact that you have cured it demonstrates that it was not typhoid fever." Dr. Alonzo Clarke said this often with the confidence of a man who knew his typhoid fever, and knew the futility of "cures." That was the attitude of the profession toward one of the grand standard ills that flesh is heir to. Typhoid was one of the noble category of diseases that filled all the hospitals, and all the books—and the thought of all the doctors; a well-rounded out, well-established, well-studied and well-known disease; an epic disease—indeed, with a beginning, a middle and an end, as could be shown in ten million charts of daily and nightly temperature. And to dispute it were treason. But, behold, the grand old entity is suffering disintegration. We have now the "Eberthien infection." Eberth's identification of the bacillus and the evidence we already possess of the history of the septicemia due to it—all give us a new view, and instead of typhoid in various degrees of gravity, of some forms so light that we scarcely venture to call the cases typhoid, and of others exceedingly deadly, we have simply all the stages of a poisoned state due to the presence in the blood of the same germ in different degrees of virulence.

From one point of view this might be contemplated as merely a change of nomenclature; but it becomes of very practical interest in view of the possibility that we possibly have an effective, almost specific, means of dealing with this particular bacillus; and, therefore, perhaps a really curative treatment for this grand old enemy of man. Recent studies of the uses of hexamethylenamine appear to indicate a very greatly enlarged sphere of activity for that medicine. Its energy as a bactericide is already well known, and a competent judge has placed it in that respect next to the bichloride. And now comes the observation that in dealing with biliary infections it is as effective as it has been found in the renal and vesical cases. If we add to this the Eberthien theory that typhoid is, in fact, simply a biliary infection, the subject becomes one of the greatest professional interest.

Dr. S. J. Crowe (in experiments reported in the *Archives International de Pharmacodynamie* (1908), has shown that hexamethylenamine is eliminated by the liver and the pancreas, as well as by the kidney; that this elimination is consequent upon its passage through the blood, and he has found it in the blood in from five to eight hours after administration. Prof. Chauffard,[1] of the Paris faculty, has repeated and verified these experiments. Dr. Crowe tested the bactericide efficiency in four cases of biliary fistula, giving on one occasion a single dose of 15 grains, and on another occasion a massive dose of 150 grains. He found an absolute sterilization of the bile; and found, as Churchman had, that the typhoid bacillus was especially susceptible to this body. Obviously this was important as to all well-recognized biliary infections, as well as for the sterilization of the vesicule as a preliminary to operation.

His most striking cases exhibited the effect of hexamethylenamine in dealing with bacilluria and in cutting short lingering cases which go on indefinitely because, apparently, the bacillus is indefinitely produced. He saw, in consultation, on the thirty-first day a case of typhoid due to the use of infected oysters—urine the color of mahogany. On the twenty-third day there had been a rigor with fever of several hours' duration. For eight successive days a chill every day and fever and severe pain in the right hypochrondium. He advised giving every day, three times a day, 7½ grains of hexamethylenamine. Chills, fever, all bad sypmtoms disappeared immediately, temperature fell, and convalescence was established. Dr. Chauffard regards it as well established that typhoid is a biliary and not an intestinal infection; that bacillemia is constant for the first seven days, and is the fundamental element of the disease, which is a descending, not an ascending, infection, and that the "etape intestinale," as the final form of the disease, is due to intestinal development of the bacillus, which reaches the intestine by way of elimination.

Excessive doses have been given in France, 150 grains a day, for instance, upon the theory that the toxicity of the drug is very low. They are, perhaps, too absolute in this, for its long-continued use in large doses will produce hematuria in some cases —but all its beneficial effect may be obtained with from 15 to 30 grains a day.

[1] *Semaine médicàle*, March 8, 1911.

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The Vaccine Treatment of Acute Articular Rheumatism.

By G. H. SHERMAN, M.D.
DETROIT, MICH.

Acute articular rheumatism is now universally regarded by modern pathologists as an infectious disease. Bacterial research started with Wilson (*Edinburgh Medical Journal,* June, 1885), who found micrococci in the pericardial fluid of a case dying of rheumatism. Budzy ("Orvosi Helilop," 1890, pp. 39-42) found streptococci in the joint fluid from the shoulder joint in a case of acute rheumatism.

Extensive research has been carried on since then by numerous investigators, prominent among them being Poynton, Payne, Wassermann, Fritz-Meyer, Menzer, Triboulet, and Walker. These researchers have settled the fact that rheumatism is caused by a coccus, but whether it is the Streptococcus pyogenes or a special streptococcus called the "Micrococcus rheumaticus" is still under dispute.

The fact that many cases of rheumatism follow an attack of tonsillitis, otitis media or other streptococcus infections is taken as strong evidence in favor of the streptococcus. "Gurich and Schichold (*Journal A. M. A.,* March 19, 1910, page 1016) have found suppuration in the tonsils almost a constant accompaniment of rheumatic affections. The germs responsible for many cases of articular rheumatism nest in the tonsil pus and pass thence into the blood."

H. Steinert, in his paper on Streptococcus sepsis, says: "The sepsis assumes an acute form, as a rule, but in those who have had acute articular rheumatism at any time the sepsis develops in a milder, more chronic form. This suggests that articular rheumatism is a streptococcus disease and modifies the reaction to later streptococcus invasion" (*Journal A. M. A.,* October 22, 1910, page 1510).

In acute articular rheumatism the organism is sometimes found in the blood in the early stages. I have made numerous blood cultures in such cases, but have never succeeded in finding the germ.

I have also made cultures from deep punctures in the swollen tissue around the joints, procuring serum and blood, but have not succeeded in finding the germs. As a rule, it is not an easy matter to procure germs from inflamed and swollen tissues where no actual suppuration has taken place. The swollen tissues around a rheumatic joint are usually of such a nature that the infecting organism cannot be found. For the reason that it is so difficult to procure the germ from rheumatic patients, it is practically impossible to make autogenous vaccines for these cases. If the inference is correct that the germs causing follicular tonsillitis are also etiologic factors in rheumatism, the practical way to procure the germ to make the vaccine is to take it from these sources.

From what we know of the etiology of rheumatism it is not to be wondered at, that conventional treatment has but little influence over the course of this disease. Some still give drugs, with the idea that rheumatism is caused by an excess of certain acids. Baths and bakes are usually given with the idea of sweating out the uric acid and other poisons. A deeper study of these therapeutic measures has led some to believe that heat and baths, as applied in institutional practice, cause an increased phagocytosis, and thus aid in ridding the patient of the infecting germs. Large doses of salicylates, given at short intervals, are also believed to increase phagocytosis. All these remedies work in an indirect manner and are thus of questionable value. Many a rheumatic is advised to go to a sanatorium because the attending physician wishes to shift the responsibility somewhere else.

One characteristic of articular rheumatism is the liability of relapses, and this is particularly noticeable in cases treated with salicylates. Menzer (*Zeitschrift f. Hyg. u. Infectionskrankheiten,* 1911, lxiii, 296) is of the opinion that the salicylate treatment is largely responsible for these relapses. He considers acute articular rheumatism a streptococcus infection, and by using the salicylates the course of the disease becomes modified in such a manner that the immunizing resistance to the infecting organism is not sufficiently developed to establish a permanent cure.

The curative value of the vaccine treatment is direct, it being entirely influential in stimulating the immunizing faculty of the system, and consequently the resulting recovery is more permanent.

My experience in treating rheumatism with vaccines extends over a period of more than four years, during which time I have treated many cases in almost every form: mild, severe, acute and chronic. I have also been in close communication with many

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physicians, over the telephone and by correspondence, to whom I have supplied vaccines, regarding the results obtained in their cases. My own experience, coupled with the favorable circumstance of also obtaining information from many other sources regarding the success of this treatment, makes me confident in predicting that the vaccine treatment will be generally adopted in treating rheumatism in the very near future.

Leary (*Boston Medical and Surgical Journal*, October 6, 1910) says: "The empirical use of vaccines, made from autogenous throat cultures and containing usually a mixture of the pneumococcus and streptococcus, has given usually prompt relief of pain and a bettering of other symptoms in a large percentage of the cases of rheumatism treated." Preston (*New York Med. Journal*, May 27, 1911, abstract from *British Med. Journal*, May 13, 1911) "reports five cases treated with antistreptococcus vaccines, all of which ended in complete and gratifying recovery."

A diagnosis in acute articular rheumatism is usually made with but little difficulty, but some cases are met with where this is not so readily done. In some cases the inflammatory process is very slight, revealing but little or no swelling, not much pain upon pressure, but painful when moving the joint. These cases are sometimes very obscure, but where the pain has a tendency to shift and varies considerably in severity from day to day the case can safely be regarded as being rheumatic. It is also often difficult to make a differential diagnosis in inflammatory and gonorrheal rheumatism, and I am satisfied that some cases that came under my observation had mixed infection, at least they did not improve until both gonococcus and streptococcus vaccines were resorted to.

In acute articular rheumatism treatment should be started early in the course of the disease to get the best results. In these cases my most extensive experience has been with streptococcus vaccine, giving 30,000,000 for the initial dose and children proportionately less. Recently I have used pneumococcus 40,000,000 and 30,000,000 combination in five successive cases, but so far the results do not show any special advantage with this combination over the streptococcus vaccine. Usually, relief from pain and a reduction in temperature will be observed within 24 hours after the first inoculation. If no material improvement should take place the first day, the dose should then be repeated and, after that, inoculations should be made at two- or three-day intervals until the temperature becomes normal and the inflammatory process subsides.

I find cases that have never had rheumatism before respond most readily to this method of treatment, in most cases the symptoms subsiding with two or three inoculations. It is advisable, however, to give three or four doses at from five- to seven-day intervals, after apparent recovery, to guard against a relapse. Cases in which there were previous attacks, as a rule, run a somewhat irregular course, although some respond very promptly. I have in mind one case that had resisted all kinds of convential treatments for over a year, four months of which time were spent in a hospital, who responded to one dose of streptococcus vaccine and resulted in a complete recovery. During all this time he had not been free from acute inflammatory attacks in some one or more joints. It is now three years since he received that dose of vaccine, and so far no symptoms of the disease have returned.

The reason that many cases of acute articular rheumatism, that have relapsed from previous attacks, do not respond so readily to the vaccine treatment may be explained on the ground, that from previous attacks many auto-inoculations from infected joints have, in a measure, crippled the immunizing mechanism. We know that such a condition often exists in chronic acne and other chronic infections.

In these cases that do not promptly recover, new joints may become involved with quite severe inflammation, but I have particularly noticed that the inflammation is not so persistent and will subside in a few days. Other new inflamed joints may follow, but will improve again. They run a checkered course, having good and bad days irregularly. In many of these cases the first indication of permanent improvement is a return of the appetite with a digestion, the desire for food becoming quite pronounced. This is particularly noticeable where the patient's digestive organs have been disturbed by giving salicylates. It seems that the immunizing functions of the body are operating to a disadvantage until additional resistance is added to the system. This condition is provided with a good appetite, associated with active digestion and assimilation. No special diet is

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required, good wholesome food, and plenty of it, seems to answer every purpose.

The prolonged anemic, debilitated condition so often found during convalescence, following the usual treatment, is not found with the vaccine treatment, and relapses seldom occur after the case has been discharged. If we hope to free humanity of cripples caused by rheumatism, we must cure them before they become chronic. Streptococcus vaccines seem to more nearly fulfill this hope than any other agency at present known.

A very important factor of the vaccine treatment is, that it seems to materially reduce the number of heart complications so commonly met with in acute articular rheumatism, only two having been met with by the writer. One occurred in a child and the other in an adult. They were left with a somewhat crippled heart, but, from all appearances, they are enjoying good health.

419 St. Aubin Avenue.

Frontal Sinus Disease.

By F. P. HOOVER, M.D.
JACKSONVILLE, FLA.

Report of Cases.

Pain is more or less a symptom in frontal sinus disease, with tenderness on pressure; when pus exists it usually makes its way toward the orbit, causing a swelling, with sinus fluctuation. In this condition there is displacement of the eye, diplopia and epiphora. Now and then the inflammatory products will produce distension of the sinus toward the cranial cavity with paralysis, vertigo and other brain complications. Death may occur from phlebitis, meningeal inflammation or cerebral abscess. It is always desirable to secure drainage as quickly as possible, and energetic measures must sometimes be resorted to.

Diagnosis.

One should bear in mind the necessity of a true diagnosis. Many times other neuralgias have been mistaken for frontal sinus disease; in the latter, the pain is often entirely absent at night, returning the next morning most excruciatingly, sometimes with an interval in the afternoon of a respite from pain. The pain may be over one or both sides, according to the amount of sinus involved. Inflammation of the supra-orbital nerve, neuralgia of teeth or sensitive teeth, hypertrophied turbinated bones, exostosis, ecchondrosis, polypi and necrosis will produce pain in the head.

Anterior Examination.

The head of the patient, when making examination of the turbinated bones and middle meatus, should be well thrown back. The inferior and middle turbinated bones have a shell-like appearance; between the middle turbinated bone and the septum there is a slit, as this bone, being rolled or curled upon itself, it presents an inner and an outer attachment; this slit is called the olfactory cleft. The orifices of the accessory cavities, except where there is extensive atrophy, cannot be seen. The lachrymal duct outlet is situated in the outer portion of the inferior meatus under cover of the inferior turbinated bone. Into the middle meatus the orifice of communication with the frontal sinus opens anteriorly, while further back somewhat is the orifice of the antrum of Highmore; the last named cavity has frequently a second communication, which is found just above the inferior turbinated bone, but behind its center. The examination just described is for anterior examinations through the nose, and, in conjunction, illumination must be employed.

Treatment.

Frontal sinus disease is easily treated and cured if no other complications arise. Free drainage, so to speak, is the first essential; the opening into the sinus must allow air to pass through; applications of cocaine, followed by a 1-1,000 solution adrenalin chloride, by the attending surgeon, while a nasal douche of some antiseptic and alkaline wash used warm up the nostril by the patient at home, many times is all the treatment that will be required. If, however, in the event of other conditions existing, then surgical interference should be employed: the removal of all abnormal growths and diseased tissue which tends to keep up the suppuration. Sometimes removal of the entire middle turbinated bone is necessary; all cavities diseased must be opened by aid of the drill, spoon, forceps, etc. Remove all granulations or necrosed tissue. It is always best, when possible, to enlarge the natural openings by removing parts of the bone about them.

History of the Disease.

The onset of frontal sinus disease may be sudden, or it may come on slowly; when the former it is a serious disease. The attacks are many times mistaken for malaria. One notices the voice sounds peculiar, as though the nostrils were closed up, also the tone lacks resonance. After a free discharge from the nose the frontal head-

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ache will temporarily disappear, but there may be a constant steady ache. The eyes are often credited with these head symptoms, as well as pain in the eyeball, and glasses will probably give relief, for a while. Occasionally the patient will complain of a pharyngitis or laryngitis or bronchitis; again there may be sudden dizziness or loss of consciousness. In acute cases the onset is with a severe chill, followed by high temperature, pain of intense character over the supra-orbital region and in the eyeball itself; not infrequently both sides may be affected at the same time. Sometimes the ear and antrum of Highmore may be affected as a result of frontal sinus disease. The prognosis is usually good, but then again there are cases that somehow will not recover and are continually having some complication. The treatment is operative, i. e., removal of obstructions in the nose to give relief of pain, free discharge of pus, and to stop the disagreeable taste in and odor from the mouth, which is always present, and to alleviate the pain; when all this fails then a more radical operation is performed. For this many surgeons have their own methods, but first drilling through the nose into the frontal sinus is performed.

History of Cases.

From January 1, 1910, to April 1, 1911, I have had seven cases of frontal sinus disease, six of whom were women and one a boy of thirteen years; three of the cases came to me for eye trouble, three for frontal sinus disease, and the boy for the removal, as presumed by his family, of adenoids. The history of three of the cases —women—were almost identical, viz, nostril occluded, hypertrophy of middle turbinated bone, great pain in and over right eye; the eye of one of the women bulged somewhat out of the socket; the patients, after removal of part of the middle turbinated bone, gave me no trouble in securing drainage to the sinus. Patients were discharged: one in eighteen days and the others in twenty-one days.

Case 4.—Female, 38 years, had frontal sinus disease for several months; pain was constant over right eye and unable to use it for reading, as sight seemed dim and cloudy; there was slight swelling in right side of nose and occasional shooting pains in right ear. Breathing out of both nostrils imperfect and especially difficult through the right, as very little air could either be taken in or expelled. On examination of nose I found, in right nostril, polypi, which were removed under cocaine; in the left nostril the membrane was reddened and swollen. After removal of the polypi from the right nostril it was found the middle turbinated bone completely occluded the cavity; operation performed following day; on twenty-first day after operation the patient was discharged, her breathing was free in both nostrils; no pus oozed through nostril as before and all pain had disappeared.

Case 5.—Left nostril would not admit of air being breathed through it, even with the greatest effort; through right nostril the breathing was normal. The throat was free from adenoids or enlarged tonsils; the little patient was crying from pain in his head, as he expressed it, which was over the left eye; on pressure over the left eyebrow the pain was intensified; inside of left nostril I found a large bony growth (exostosis). I could see nothing beyond, as growth filled the cavity. I sawed off exostosis and found many polypi beyond, which were later removed; the bleeding was considerable, even with free use of adrenalin. For several days the pain ceased nearly altogether and then came on with great intensity; there seemed to be fair drainage from sinus, yet the pain continued unceasingly for three days, when, under general anesthesia and laying back the nose, I found considerable necrosis in the ethmoidal cells. The patient was discharged twenty-three days later. When last I heard from the patient, early in February, he had had no relapse of pain and could freely breathe; wound entirely healed and very slight scar. He was using a diluted antiseptic as a douche, up nostrils, warm, three times a day; he also stated he was eight pounds heavier than before the operation, three months prior.

Case 6 was sent to me for treatment from New York, by a specialist, three years ago. She came here to spend the winter, and does so each year; she is under my care during her sojourn in Florida; she has had frontal sinus disease for years, the last operation in her nose being September, 1909. When first I saw patient the exudation of pus was more extensive from right than from left sinus, the mucus membrane was very much thickened. I made an application of 2 per cent. solution of cocaine on a very small pedget of cotton high up in both nostrils, followed by an application of a 1-1,000 solution of adrenalin chloride to the middle meatus and inferior turbinate

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of both sides. With a still smaller pledget of cotton I applied the same solution to the posterior ethmoidal cells that corresponds almost with the infundibulum of the right side, the patient having had an anterior ethmoiditis of right side and a posterior ethmoiditis of left side. There was a slight pain over both eyes. In December, 1909, the patient contracted a severe cold and came to me in intense pain in and over both her eyes, also pain in right side of her face and ear. I found mucous membrane of both nostrils red and swollen, considerable exudation of pus, swelling over right maxilla alongside of nose, roof of mouth on right side painful and swollen; drum membrane of right ear reddened and ear sensitive to touch. I treated nose as before mentioned and, in addition, made an application of 50 per cent. solution mono-chloro phenol, sufficient only to moisten a minute piece of cotton; following this, I made an application of 50 per cent. solution argyrol, and then I sprayed nostrils with a menthol-eucalyptol-albolene combination. I also ordered her to inhale one teaspoonful of the following in a cup of boiling water four or five times a day, to increase the flow of mucus and reduce the swelling:

℞ Menthol, 1 dr.
Chloroform, 1½ dr.
Oil eucalyptus, ½ oz.
Tinct. benzoin comp., q. s., 2 oz.

I treated her twice during the following week, the symptoms were greatly relieved, but swelling of antrum and pain outside over face as great as before. With co-operation of a dentist the antrum was opened and considerable muco-pus and a slight amount of blood was evacuated; the antrum washed out with a warm antiseptic solution and packed daily; drainage was continued for ten days and wound allowed to heel; pain over face and antrum entirely disappeared. No case is more interesting than the above, demonstrating, as it does, the length of time these chronic cases will remain under treatment and conditions arising from time to time necessitating surgical attention. I think the patient said it was now eight years since she was first bothered and the first operation performed. Patient is well nourished and healthy in every way and has no scrofula or tubercular history.

Case 7.—Female. Sent to me January, 1911, for examination. Has suffered constantly with headaches, more over the right eye; for two weeks the only relief was obtained by sedatives. The pain was the same during the day as well as the night; the family doctor fancied glasses were required, although prior to attack she had never been troubled with her eyes in any way. On examination I found considerable congestion of membrane in both nostrils; difficult to breathe out of left and could not breathe at all out of right; naso-pharynx was clear and free of adenoids, no enlarged tonsils; eyes were slightly reddened, but right eye was intolerant to light, the left eye but slightly so. I passed a probe, with a small pledget of cotton, high up in the left nostril, but could not do so in right. Finally, after many efforts with very small pieces of cotton on probe, dipped in 2 per cent. solution of cocaine, succeeded in reaching frontal sinus of both nostrils; the treatment was repeated daily for ten days, the patient using sprays at home in the intervals; the headache gradually subsided, and finally, when drainage was re-established, all head and eye trouble ceased entirely. She dated cause of attack from time of getting her feet wet and neglecting to change her stockings and shoes. as she had gone to the house of a friend to spend the afternoon. The following day she sneezed a few times, and some days later headaches commenced. Since January I have met this patient several times, and she has had no recurrence or symptoms of her previous trouble.

Mutual Life Bldg.

The Disinfection of the Operative Field by Tincture of Iodine.

Karl Fritsch,[1] of Breslau, Germany, strongly advises that the operative field be gone over twice with a 5 per cent. tincture of iodine. While this does not render the area sterile, the subsequent chemotactic action of the leucocytes and tissue cells will destroy the remaining bacteria. This is shown by the fact that if the edges of an infected wound are painted with the iodine solution the bacteria are killed off, notwithstanding the fact that the iodine does not come in direct contact with the organisms themselves present in the wound. Fritsch believes that this method is the quickest and best way of preparing the operative field in use at the present time, and that it yields results the equal if not the superior, of any method yet introduced.

[1] *Beitrüe zur klinischen Chirurgie*, August, 1911.

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Triple Natural Alimentation.

By Dr. Monteuuis,
Of Nice, Saint Antoine.

Diderot loved to say, and we like to repeat after him: "That there exists in man a natural being, inside of which we have introduced an artificial one, and from this fact we have a constant civil war going on that lasts all our existence."

This is strictly true of modern life, and shows us the revolution that is now going on and is needed to bring us back to a natural life.

In order to explain new ideas, we must make use of some original expression, so that we may strike our hearers or readers. We therefore propose that our method be called "Triple Natural Alimentation," by which we should return to nature.

The fundamental fact of nutrition, or repair of vital energy, is found, of course, by alimentation, to which we add rest.

There are many methods spoken of to accomplish nutrition and our needs, but in reality they can all be brought down to one: Excitation. This is so true, that we have declared that the whole art of medicine or cure consists in arousing the system and stirring up the organs and functions by some form of excitation.

Vital force, strength, vigor, health, and our resistance to cold, fatigue and disease, have their principal source in alimentation, but we must not think that the digestion of alimentary substances is the only origin of strength.

Man is not nourished only by bread alone, or by the food that passes through his digestive organs, but also by air, an aliment that he gets into his economy by the respiratory passages and the skin.

Air is the bread of respiration, the *"pabulum vitæ"* of the old writers, and is as substantial an aliment as flour is, for not only does it contain the essential, oxygen, but also a whole series of elements that we do not thoroughly understand.

Alimentation is not only digestive and respiratory, but it takes place by the skin, which is much more an organ of absorption that of elimination, as we have been taught at school. It furnishes besides to our organism elements that are as essential as bread, oxygen, etc.

The longer we follow the scientific evolution and discoveries of our era, the more man appears to us as a transformer of forces that he gets from the elements around him. Leroy-Berrier expresses this thought thus: "Man is a center of energy in a universe of forces, that is not understood." The theory of "calories," which is the modern doctrine in aliments, we consider to be an error, which we call the "counterfeit money of nutritive economy."

The character of the aliment is to furnish to the organism the energy which it has spent in all the manifestations of force, such as movement, thought, heat, magnetism, electricity, or, in fact, activity in all of its forms.

To-day, when the organism seems to be a transformer of force, much like an electric machine, it charges itself with vital energy and takes it from the universe of strength and similar forces about us. If this is so, the doctrine of calories can no longer remain as the directing notion in alimentation. Man can no longer be considered as a digesting machine only, that we have to stoke, as needed, with a certain number of calories. Alimentary hygiene must now call upon that wonderful and little known force of nutrition, the air, and it can be absorbed without effort; although it may be imponderable, this element is essentially strength-giving.

Besides air, we have as physical elements what has been known and called so far: heat, light, electricity, and magnetism, but we now understand them to be a manifestation of universal energy.

We consider that we should have to ignore the recent discoveries of transformation of cosmic forces and their application to hygiene and therapeutics, if we continued to live under the false idea that our organism gets its strength from digestive alimentation only.

The theory of energy created by Mayer & Helmholtz is the scientific conception that is most in harmony with modern science. It considers the universe as a vast reservoir of energy, and that man receives a minute portion of this force, which he adapts to his nature and returns to the universe.

Dr. Deschamps, in a late work on *"Maladies de l'energie,"* shows us the diseases of energy and the application of the above theory in medicine.

In any case, we must give up the too narrow-minded theory and exclusive idea of calories. The joint liability that exists between our functions of absorption and elimination, that is so very variable, according to the season of the year and the climate

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we may be in, as well as the temperament of different persons, no longer allows us to accept this theory of calory in vital alimentation; above all, when we physicians not only see our patients, but whole races of people, decaying in health, can we not see that it is not only the digestive tract that is at fault?

No matter what method we undertake to use in cure, we cannot now put all the work of repair on digestive alimentation and make it do more labor; above all, when we know that its weakened physiological state needs care and rest.

Under these conditions, why should we not think of the cosmic forces that can be absorbed by our patient's organism without giving it any work to do? In all conditions of functional insufficiency of the digestive organs, nutrition by these imponderable aliments is the best system to use, as it will prevent the overwork usually given to the digestive organs, and the skin surfaces will better reach the nervous centers that control the forces of vital energy.

If we study the alimentation of different races of people and the various climates as well as the seasons, we shall see that all travelers in the warm climates mention the frugality of the savage, but they have failed to see that their alimentary habits and regimen have connection with the fact of their nudity.

We all know that we ourselves during the hot season eat very much less than in winter, but we do not search for the reason of this fact in the power of the solar energy, or in the influence of the temperature, which all the same makes us dress lightly. It is just here that we find a correlation between the increase of the skin's function and the vital tonic action of the air, as the body is more exposed to it in summer, while the diminution of the foods do not prevent full alimentation by nature's means of air.

The increase in the supply of fruits and vegetables at this time of the year should be an invitation from Nature to use them plentifully and give up the fats and meats. Notwithstanding the intense fermentation that heat sets up in the animal products in summer and the natural dislike we have for meat, fish, etc., we continue to eat all the same about the same quantity in all the hotels and many private houses as in winter time.

Thus blind routine and prejudice keeps us to the strong forms of alimentation (as we think they are!), while the summer diarrheas and all the common intestinal troubles at that time do not make us think of changing our diet for good. Indeed, many physicians will tell their patients to leave off all fruit and vegetables in summer, when they have a tendency to intestinal irritation. Is it then these good things that cause intestinal irritation, or is it the bad meats and fish?

Some of the partisans of the caloric system will say that it is the heat of the human machine in summer time that causes the difficulty, but we cannot believe this false statement. It can be easily proved every time man approaches natural life in his foods, which may be, well, according to our system; fruiterian in the morning, a little carnivorian at noon meal and vegetarian at the night meal. Nature has long ago taught us that fruit is best for the morning meal; meat may be taken, when needed, at the noon meal, and the evening meal had best be vegetarian.

Man's real element is not water, but air; by this last he can be nourished, through his lungs and his skin; his strength will be renewed by absorbing these ponderable elements of nature, which are potencies not yet enough known to be properly used.

It has long been known that natives of warm climates reduce their alimentation to a few figs, some rice, etc., and yet are as strong as those who live on meat foods. Here, again, we can prove that the doctrine of calories is false, by these rations of the coolies of China and Japan. It is just because this idea of calory is so fixed in the ideas of alimentary writers, that we must combat it on every occasion and show that we have to take a larger conception of the means by which the organism renews its strength. Light, then, and air are sources of force, that are natural and easy to transform into vital energy, much more so than beefsteak, which can only furnish its famous calories after a long and sometimes painful act of digestion.

It is not only excitation, but a real production of energy that our natural alimentation by the skin produces. The proof of this can be found in the fact that in very cold countries the natives find that it is necessary to take air baths to the skin. Nansen tells us that in his travels in Greenland he saw that the natives had the habit of taking off their fur clothing and skins, and remained naked in their tents for some time. They know by tradition and experience that the habit of skin baths keeps

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them in health and strength. It has been seen also, that when they take to houses and give up their open tents, they are carried off in thousands by phthisis.

At Leysin, in Switzerland, where the most serious cases of consumption are treated by exposure to the air and sun, we have seen most wonderful cures; so much so that they are spoken of as real resurrections! Here the whole of our Triad of triple alimentation by the stomach, air, lungs and skin are used, and it may be remarked that these patients may be supposed to lose many calories by the open air, yet they are not overfed, still the air nourishes them. These clinical facts are not capable of proof in a laboratory, but we can do as Pasteur said to Raulin: "Always take experience as your guide."

In the old days Hippocrates said, that "Air is the first of aliments," and the Greeks and Romans had their air and sun baths established on the roofs of their houses. To quote the father of medicine again: "Expose yourselves to free open air often, but not immediately after meals."

In those old times, they made a point of getting a good physical education by atmospheric agents, and Müller writes that they despised a man whose skin was white, soft and anemic. They also were the first to understand that to get a full benefit from gymnastic exercises they had to take off their usual clothes, and put on a bath suit, so as to allow the air to get to the skin. Dr. MacAuliffe, of Paris, gives, in his interesting work "La Therapeutique Physique d'autrefois," just how the Romans carried out physical therapeutics. Faure, in France, in 1774, wrote on the use of sun heat in the treatment of ulcers. Dr. Turck, of Plombiéres, France, in 1852, published a remarkable work on the "Treatment of Old Age by Baths of Sun and Air." He was the first of the nature curers. Notwithstanding this, in our days this function of the skin is too little known and practiced.

Hydrotherapy and the water cures in general seem to drag along their merits very slowly in hygiene and treatment, and we are of the opinion that water cure would derive much benefit from pushing the air and light additions to it, and if we were to teach more than we do of the great advantages of air, light and sun baths, in connection with water ones, we would do much good. People somehow do not care for water cures alone, first of all because, for a number of generations now, we have covered up the skin so closely that it no longer fulfils its original function, and being no longer excited and nourished by the air, it has fallen into a state of physiological misery and we shiver and cannot bear to uncover ourselves; many can hardly change their clothes at all without feeling this effect.

For these reasons water cures alone have not gotten on, and the skin cure and its hygiene, as well as general health, has lost its chance of helping water and air cures.

Our modern conception of man is, that he is a triple-mouthed focus of combustion—by the skin, lungs and stomach. Aerotherapy will bring us to a natural life much quicker than hydrotherapy.

The evolution of hygiene and the preservation of health by the natural life methods, have made in Germany, alone, a most astonishing advance—their progression in late years is, indeed, wonderful. We find more than three hundred "Naturkur" societies combined, and having their head centre in Berlin. The day is not far distant when there will be more of these nature cure establishments than there will be bath houses. In France we are following slowly this return to nature, but it is coming to us, also, to recognize the great therapeutical value of these great forces to our organism.

Baths of light and air and sun are well given already on the Riviera, with all its advantages of tonic, exhilarating air and bright sun, where chronic diseases can obtain this treatment all the winter.

Every one can fit up a special room in his own house to combine these baths of light and air and sun with exercises, as well as the usual water cures.

We conclude, then, that the modern theory of alimentation based on calories is on a false route, and that our practical triple natural form for alimentation is to be preferred to it. It is now applied by baths of air, sun, light, sand baths, massage, inunction, friction, and then hydropathy, in an empirical way, and its mode of action has not been properly studied, but we hope that modern medicine will take up the matter of these re-discoveries, and in our epoch put their results on a scientific basis.

We may sum it all up shortly by saying that man, in order to enjoy full and complete health and vigor, should nourish himself not only by the digestive tract, but also by the lungs and skin, and by these three methods he will find the material elements of energy and force.

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It has long been known that where light and sun do not enter the doctor does, and that tuberculosis and many other diseases are found growing in obscure places.

Tuberculosis and Fresh Air.

To THE MEDICAL COUNCIL:

The reading of Dr. M. H. B. Tuller's communication in the July COUNCIL on "Tuberculosis and Fresh Air" prompts me to write what follows:

It is true that people in the country lead an *outdoor* life the greater part of each year. During this time, and this time only, they are protected against tuberculosis, but it is the *indoor* life they lead, in which they breathe aerial sewage and contract the disease. This includes 365 nights, sitting at their meals, reading on a Sunday afternoon, working in ill-ventilated stables reeking with foul air, attending church and moving picture shows, and many other places where foul air is to be found. People out in the country are not any more particular about open windows that people in the city. Their homes are warm, the windows are closed, and they breathe the unventilated air. The beneficent effects of the fresh air inhaled by day are more than balanced by the evil effects of sleeping in unventilated rooms. Airing a room for an hour, or even for ten hours, does not ventilate that room for twenty-four hours, and when the life-giving air in a room is not replaced by fresh air, rebreathed air carries back into the lungs carbon-dioxide and other poisonous products previously exhaled, which nature never intended for further use. The country folks keep the windows closed in the winter as do the city folks, in order to save fuel consumption, unfortunately at the expense of their own body consumption.

If the serous lining of the peritoneum affected with tuberculosis is favorably influenced by exposure to the air, so must be the lungs. Not only the lungs breathe, but the body also. I heard Professor Northrup, of New York, state that it was more essential that the body be surrounded by fresh air than that we breathe the air. The experiment was performed in the following manner: the body of a cat was placed into a rubber bag, and tied at the neck, leaving the head outside. Naturally, the cat scratched and tried to get out of the bag, but after the lapse of a few minutes it began to quiet down, and finally it dropped its head. The cat was immediately freed and allowed to revive. Then the head was placed into the same rubber bag, with its body remaining outside of the bag, and again tied at the neck. The cat made violent efforts in trying to free its head. It ran into everything from one end of the room to the other, back and forth. This was kept up for a long time. Finally, the cat was caught, the bag removed, and the cat was found to be none the worse for its experience.

To the bacteriologist the sputum is only the cradle in which rocks the tubercle bacillus, the evil product, as I see it or as most of us choose to call the cause of the white plague. But the end is not yet. The keen and scientific observers, with the help of the microscope and chemical reagents and a gullible profession, may yet discover some other greater and more important cause that is now hidden among the débris of the sputum, and which, in due course of *scientific* progress, will assert itself.

While fresh air is essential, care of the bowels is a very important part of the treatment of tuberculosis. It is more important to empty the bowels than to fill the stomach. An empty stomach will excite hunger that may be easily satisfied, but a stagnant bowel will cause disease that may be difficult to relieve or even bring on a fatal termination. To best accomplish this is done, not by feeding the maximum quantity of food that the patient is able to ingest, but by giving him the minimum quantity of food needed to combat the disease and to restore him to health. Large meals are depressing, and small meals are stimulating to the sick and healthy alike. There should be an interval of at least five hours between meals, to allow sufficient time for digestion.

If fresh air alone does not cure tuberculosis, it still must be given first place among the essentials in the treatment of this disease.

Newark, N. J. LEWIS WEISS, M.D.

The Importance of Students Attending Confinement Cases Before Graduation.

Dr. Barton Cooke Hirst, of the University of Pennsylvania, in a letter to the MEDICAL COUNCIL, makes a plea for demanding of an applicant for a license to practise medicine evidence of practical training in obstetrics. In Europe the attendance upon forty to fifty cases is required before a candidate is licensed to practise.

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One Venereal Menace.

By G. HENRI BOGART, M.D.,
TERRE HAUTE, IND.

Recently a young man, a graduate of a great university, who has been taking a lively personal interest in my work along the line of eugenics and the venereals, asked for some reprints and extra copies of journals containing some of the more radical of the papers, which I have published, that he might send them to a physician of the university town, and upon my stating that I would be in that city within a few weeks, he asked me to mail the literature with an explanatory letter.

He, as well, wrote the gentleman, and a lively correspondence followed, so that when I reached the city, it was not for the transient call that my first intentions had contemplated, but for an indeterminate stay, until I should complete an investigation.

I found my correspondent, himself an alumnus of the college, living in fine style, with all the accessories of a plentiful income. He is *par excellence* a specialist. With a lively interest in the work of combatting the venereal plague, he gave me the fullest confidence.

When the autumn term opens, he mails a covered card to each of the matriculants, a species of letter of introduction, modest to the highest degree. His practice is the treatment of specific disease among the students.

Fortunately, he is a deep student in his specialty, and a man with a broad sense of the terrible effects of these ailments, and his treatment is as advanced as any I have yet found. He thoroughly seeks the cure of his patients, he uses the microscope, he takes the boys into his confidence.

All this is a great benefit to the students and to humanity, a Godsend that they are protected from the charlatan or, what is almost as bad, the practician who, through ignorance or carelessness, is satisfied to dry up the obnoxious flow and relieve the inflammatory conditions—and stop.

He keeps a complete case record, and I was astounded to learn that his annual list included almost one-third of the entire enrollment of the institution, and that fully 90 per cent. of the graduates had been numbered with his clientele.

Other universities may have the advantage of so conscientious a practician, I have not been able to learn of any, but, from the very nature of the matter, the veil of secrecy, even within the profession, is so thrown around the venereal infections, that it is impossible for us to know accurately definite statistics of this gnawing horror.

Through him, I made the acquaintance of an elderly gentleman, who, while he does not cater to and solicit this particular practice, yet has a large clientele from the scholarship of another college, a co-educational institution, and from him I learned the astounding fact that both sexes were represented on his lists, and that the young women were, as he pointed out to me, of the highest respectability, and, furthermore, that the secret, the publicity of which under our double standard of conventional sex relationship would have proven so fatal had been maintained in all the female cases of this character, that had come under his care, in a period of more than thirty years.

The number of cases of this character was far greater than I would have believed possible, though the nature of the source of my information naturally precludes my being definite as to detail.

The facts in this second instance will, if properly considered, lead to some serious trains of thought. .

In the *State Bulletin of Indiana* on "Social Plagues and Sexual Hygiene," there is given a case wherein a girl, a student of the high school of Indianapolis, had infected a large number of boys—nearly a score—and the facts did not become personally public.

All of this means that we are not pursuing the best line of preventive medicine when we are devoting so much time to attacking the public house of prostitution, in our efforts to stamp out, or even control, the ravages of gonorrhea and syphilis, particularly the former.

Recently, a medical missionary of the Presbyterian Church wrote me from the South that he had noted some of the plain papers that I had published on eugenics and sterilization, and asked for a complete list of all my articles on this question that he might buy and study them.

In the correspondence which followed, he informed me that the reputed sturdiness of the mountaineers of the Appalachian region, where he has worked with rare self-sacrifice for years, is a fallacy; that they are honeycombed with venereal infection, and that the terrible ignorance of the people, individually and collectively, furnishes a fertile field. The gentleman came from his

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home in Tennessee to see me, the better that we might study the question, and he has an immense mass of field notes and photos, which were, to say the least, a startling surprise.

While the name of this gentleman is, for obvious reasons, suppressed, I will gladly forward any question of importance to him if accompanied by postage. *En passant,* one who is much before the public as a writer finds a never-failing source of surprise in the number of correspondents who ask for information for their own private benefit and fail to enclose postage for the reply.

I have been impressed, all through life, with the seeming coincidences which occur, though many of them doubtless result from the mental receptiveness, which causes the circumstance to become prominent.

Shortly after the investigation of the first university I had occasion to become acquainted with a civil engineer, and finding that he had studied at this school I asked him if he were acquainted with the doctor in question.

After a bit of sparring he told me that he owed more to this physician than to any one professor of the faculty.

When he had received the notification card, previously mentioned, he had gone to the doctor and told him that, as he was working his way through school, he would not be much investment in case he should get into trouble, and that he would far rather have information, for protection, than a cure.

The physician was at once interested, and not only gave the desired instruction, but went farther and gave the student data as to the real facts concerning sexuality, which every person should know, with the result that he has remained free from infection and knows that Nature has provided for a safeguard, in nocturnal emission, for the continent, etc.

Would, for the sake of the race, that every young man, and young woman as well, could have the same instruction!

His partner, who was with him, had been a college chum, but had suffered three attacks of venereal infection while in college, the last happening during his post-graduate work at another school.

Shortly after graduation he had married, and a daughter had been born to the union within a year.

Later the health of the wife had broken down, and she had submitted to an ovariotomy.

The child, a winsome girl of 7 years, is delicate—what the old pathologies described as "of scrofulous diathesis."

The father has developed tubercular affection, hemorrhages and emaciation, and with his family has been living for a year in a tent, which he carries from place to place, as his employment changes.

I find it difficult to present a more perfect picture of the "deadly waste of sexual crime" than this family: the father, with all his magnificent equipment for the world's good, doomed; the mother reft of womanhood, and the child foredoomed to invalidism.

I was not allowed to make any examination, nor to question the family, as the first gentleman, my informant, cautioned me when he took me to the tent that this was not permissible.

But the father, with an insistent ring to his voice and loving glances at the child, asked: "Isn't she a hearty looking girl, doctor?" and with the half truth that has come to be part of the equipment of the medical man, I answered: "She is surely vivacious."

While with a bunch of newspaper men one morning as the writers were on the "dog watch," the interval between the closing of the forms and the final issue of the paper, the young men were plying me with queries as to sexual matters, and one of them, recently married, told that while in college he had danced at a sorority with a student whom he knew to be in the "clap" class, albeit she stood high both as a student and socially. He wished to know why it was that there was none of the usual sexual excitement while clasping this girl in the waltz. I mention this incident merely to emphasize the fact that this insidious poison is stealing through the halls of our colleges and schools, and that convention and policy are hiding the trail of the monster.

My purpose in relating this is to call attention to the fact that, while we are assailing the public prostitute and clamoring for restriction and suppression, we are at the same time hugging the more virulent sources of infection to our bosoms in sublime ignorance.

The remedy lies at the distal end. When the youth, no matter the sex, shall have been fully informed on this momentous question, then self-preservation, a higher self-respect; in a word, the prowess of knowledge, will

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do more than all restrictive and repressive law, for law is more honored in the infraction than in the keeping in too many instances, and there is no law capable of enforcement, unless a pronounced public sentiment stand behind it.

304 South Fifteenth street.

Should Venereal Diseases Be Reported?

EDITOR MEDICAL COUNCIL:

Articles under the above caption have appeared in the July and August numbers of THE MEDICAL COUNCIL that are of more than passing interest because the question raised is one of vast importance, viz.: whether we, as physicians, are content to continue our responsibility for one-third of all existing blindness; for sending from 60 to 80 per cent. of all women operated on for pelvic disease to the operating table; for countless thousands of neglected cases resulting in incurable diseased conditions, simply from our inaction, unreadiness and unprogressiveness.

Every one conversant with current medical literature should know the fact, even if failing to comprehend its mighty import (and few of us fully realize it), that gonorrhea and syphilis taken together through their whole course, are responsible for loss of life, impaired health, marital unhappiness and economic loss to a greater degree than smallpox, typhoid fever, the plague, or any other of the great scourges of the human race, not even excepting tuberculosis.

And yet, there are those who seem to be satisfied with present conditions and say: "Don't meddle, let it alone; venereal disease, whether mild or severe, acute or chronic, is ever a serious matter, but it always has been and always will be. You can do nothing but take care of the cases that come to you and pocket the fees." Now, is that true? Has nothing been done for smallpox, for phthisis, for malarial and yellow fevers but treat cases already developed? Why is it that so much heat is manifested in certain quarters whenever an attempt is made, or a measure suggested, having for its object the supervision and control of venereal cases? The contention that in these diseases corrective agencies must be proven effective even before they are given a fair trial is like the woman who forbade her son going near the water until he had learned to swim. Not all "from Missouri" are seekers after truth and rightness.

The reasons usually given why venereal diseases should not be reported are rather ancient and by no means convincing. It has been said that no regulation or law of this nature could be enforced. It may well be answered by "How do you know 'till you try?" It was so stated in connection with tuberculosis; see the result? It is asserted that such a measure would be extremely unpopular; undoubtedly it would. Who ever heard of a scientific project in preventive medicine that was not unpopular until tried and found to be efficient? Even then acquiescence is frequently given with great reluctance. Do not forget that Jenner was met by malignant opposition both within the profession and without; Lister was ridiculed; and other world benefactors have been visited with abuse and defamation. I can remember when the quarantining of smallpox was violently opposed, and its reporting, as well as that of scarlet fever, diphtheria, and particularly tuberculosis, was derided by physicians and the laity alike.

Objection is made that the reporting of venereal diseases would drive all of this class of patients to the quacks and *we* would lose their business. Here appears to be a Senegambian of considerable size. It does not anywhere appear that this protest is urged in the interests of the afflicted, but rather regarding its effects on the physician's pocket. Fine, is it not? Good reasoning! Sound logic! Noble profession! Great is commercialism.

Furthermore, it is claimed that as police reporting and registration of prostitutes has not been brilliantly successful in the prevention of prostitution, therefore the reporting of individual cases of diseases must be without good result.

In my opinion here is where a mistake has been made both by physicians and civic reformers. The attempt to jugulate the disease by registering and treating the women and letting the men go free to spread it indefinitely, as by the Berlin method, must be regarded as farcical. If we concede that gonorrhea and syphilis are dangerous diseases, we must also admit that the free, unrestricted intercourse in business and social relations of those suffering therefrom is a menace to the public welfare and is little less than criminal in its allowance. As physicians we have nothing whatever to do with prostitution, but the presence of serious disease at once calls for our best efforts to subdue it. The disease, not

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the man, is the point of attack. We should assail it vigorously wherever found and follow it to the end. When a person, through ignorance cannot, or through wilfulness will not, restrain himself for the public good, he should be put under restraint by proper authority. I am confident that this can be done without undue infringement of personal liberty, without destroying the relations normally existing between physician and patient, without publicity, and without more than slight and temporary embarrassment to any one who cares for anything else than mere selfish indulgence.

But reporting in itself, while necessary, is only a step, and a small step at that. Others will follow as occasion demands. If the people of this country are to be free from venereal contamination they must be educated; not so much about sex, anatomically and physiologically (many know too much already), but about the diseased conditions resulting from illicit sexual intercourse, and how innocent lives, fecundity and health, are daily sacrificed because of ignorance in these respects.

If the people generally knew the truth of the matter, the demand for a radical change in our present methods would be immediate and imperative. Possibly, it might be accomplished by such an upheaving that for some it would render life hardly worth living. Therefore, education in this direction must come slowly, perhaps, but come it must.

Every physician knows that there is scarcely a hamlet in this broad land where one or the other of these diseases does not exist, subjecting men, women and children to its fell influence, defrauding young married women of their right to physical health, and requitting their trust and ignorance by chronic invalidism and shortened lives. Still, we doctors sit with clasped hands, afraid to disturb the present order for fear we might lose a few dollars, or meet with merited reproach for our long dalliance. Is that spirit consonant with a true physician's high ideals? Is that an attitude to be proud of? All honor, I say, to the man who had conviction of a wrong to be righted, and who had the courage of his convictions.

G. V. R. Merrill, M.D.

Elmira, N. Y.

Correction.

In August Council, page 313, second column, under "Serums," at the end of the second paragraph, instead of "Boyle's" read "Burgess'."

Why Venereal Diseases Are Not Reported.

Editor Medical Council:

Dr. Prince A. Morrow, in a recent number of the *New York Med. Journal*, makes a strong plea for the notification and registration of all cases of venereal diseases. He says: "It is not probable that the notification proposed by the health board would involve any violation of professional secrecy that ought to be respected. Even were the report of all cases required, the information furnished would, doubtless, be kept secret by the sanitary officials; it would not be proclaimed from the housetops or in any way made public."

But suppose that we lived in a so-called republic whose rulers, so far from being selected and elected by the citizens, were nominated and elected by fraud, by a ring of criminals who, having got power, kept it in spite of the efforts of decent citizens to oust them, and if their power to rule was derived from their close relations with the lowest and most depraved element in the community, which they used as their willing agent, through whom they corrupted voters, fraudulently personated voters, intimidated the timid, purchased the venial, falsified by a system the election returns, so that they and theirs were always elected—if these same rulers, from the highest to the lowest, from the highest ruler down to the most minute officials in country, State, city, division, appointed to all positions only those whom they knew would be their willing tools, if these conditions existed—would the registration of venereal disease be a practicable and a safe thing?

For the man infected, by his own immorality let us grant, is to a certain extent in much the same position as the woman who has or will soon have an illegitimate child. We say nothing of the tens of thousands innocently infected, and to whom the same argument applies with even greater force. The secret of either man or woman, once known to their world, dooms them to a life of disgrace. Does any one imagine that a list of such cases could be, by any possibility, kept in any registrar's office or in his safe without being reached by the conscienceless underlings of the department and form speedily the basis of blackmail? For with the conditions now existing, or which we have supposed to exist, it would be unsafe to trust to any one in power, however limited that power, any secret whose reten-

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tion is vitally important to our welfare. Profuse promises of "inviolable secrecy" are a mockery and a lie, as the past has sufficiently shown.

So in this view we see that the registration of venereal disease stands on a totally different footing from that of tuberculosis, cancer or the contagious diseases like smallpox, scarlet fever and the rest. These may suffer hardships, isolation, quarantine, pecuniary loss, though they should not have to bear the last, but never disgrace! Let us wait a while, till our land is an Utopia, till the millennium comes, when the blackmailer lies down with the missionary, and the murdered with the priest, and till then, if tempted to make such laws, ask ourselves, Was it without any reason that all these years we have never reported these cases, and that with all the perils they bring us and ours they have never had enforced publicity.

EDWARD WILLARD WATSON.

Suburethral Abscess.

By HARRY EDWIN MYERS, M.D.,
Clinical Instructor, Genito-Urinary Diseases, Starling, Ohio, Medical College; Assistant Surgeon, St. Anthony's Hospital.
COLUMBUS, OHIO.

Suburethral abscess is a peculiar disease of the female urethra, about whose etiology we are still in the dark.

Hugier is supposed to have been the first man to describe this disease. Kelly states that he found the first real description in William Key's "Practical Observations in Surgery," published in Philadelphia in 1805, page 304. It has been variously called "Suburethral abscess," "Abscess of the urethral vaginal septum," "Chronic abscess of the female urethra," "Urethral urinary pocket," "Urethral diverticulum," and "Urethrocele."

The essential features of the disease are an abscess cavity in the urethro-vaginal septum communicating with the inferior wall of the urethra. The disease presents itself as a symmetrical rounded swelling of the anterior vaginal wall beneath the urethra, varying in size from a marble to a hen's egg, or from 2 to 3 cm., with its longest diameter in the axis of the vagina. The enlargement begins 1 or 2 cm. behind the external urethral orifice, and may extend back to the base of the bladder; it is sharply circumscribed, and can, as a rule, be seen at once, filling the vaginal outlet on separating the labia. It may be situated further back toward the neck of the bladder, and may be detected by the finger as a peculiar cushiony resistance at that point. The surface of the tumor is smooth, sometimes tense and elastic, or yielding to the touch. If firm pressure is made upon the tumor it diminishes in volume as the contained pus flows out of the urethra. It is extremely painful when handled.

Report of Case and Treatment.

As a rule, when these patients come to a surgeon or gynecologist, they have been suffering at periods for a number of years, and have often, as in a case which recently came into my hands, been treated for an irritable bladder.

They are usually married women in the thirties, and complain of irritability of bladder, painful micturition, dysuria, excessive pain in coitus, and a sense of discomfort and bearing-down as if a foreign body were in the vagina, as in this case:

Family History.

Mrs. P., No. 524, age 53, married, and has given birth to five children. Father died from bowel trouble; mother living.

Present trouble began about twelve years ago, with bladder trouble. She has had trouble at intervals for the past twelve years with voiding her urine, and irritability of bladder; also dysuria, painful micturition and extreme pain during coitus, but frequently after micturition a few drops pus comes from the urethra. When standing there is a bearing-down pain during these attacks, and, on examining herself with her finger, finds a tumor in the vagina.

Examination.

Upon examination I found a roundish tumor about the size of a hen's egg, about three-quarters of an inch behind the external urethral orifice, very painful to touch, and on pressure there was a discharge of pus from the urethra. Urethroscopic examination showed a congested mucosa, and on withdrawing the speculum a few drops of pus suddenly gushed into the lumen of the urethra. I then moved the speculum to and fro, and discovered a fissure on the floor of the urethra leading into the abscess cavity. I then passed a bent probe through the speculum into the opening of the fissure into the abscess cavity, and could feel it distinctly with my finger introduced within the vagina.

Treatment.

After anesthetizing the mucosa by injection of a 6 per cent. solution of cocaine, I

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then divided the tumor in its long axis, making a longitudinal vaginal incision about one and one-fourth inch long, packing the cavity with a wicking of sterile gauze, removing the gauze on the second day and repacking every day thereafter for about one week. The wound granulated nicely, filling in the cavity, and the patient was entirely relieved of her trouble.

Other methods of treatment have been recommended by Kelly & Gilliam, as follows:

A.—Dilatation of the urethra sufficient to introduce the finger and enlarge the fistula by forcing it into the sac and so giving free exit to the accumulations.

B.—A simple longitudinal vaginal incision into sac with knife or cautery.

C.—Exsection of an elliptical piece of the urethro-vaginal septum, including part of the sac wall, with or without suture.

A very simple operation and one that will bring immediate relief is that of William Hey. A longitudinal incision into the sac; after benumbing the vaginal mucosa with a 10 per cent. cocaine solution, the sac is split open from end to end with a knife, the wall of the abscess may then be painted with a strong solution of iodine, and packed with lint or iodoform gauze.

Tincture of Iodine and Aluminum Acetate in the Treatment of Recent Wounds, Cuts, Stabs, and Contusions.

By DOUGLAS H. STEWART, M.D.,
NEW YORK CITY.

Running like a thread here and there in the medical papers (MEDICAL COUNCIL included) may be found a nebulous suggestion which would rather tend to affirm the idea that, if a man would only write a short article and base it on his own practical experience, then even though he wrote on a well-known subject, on a theme which he thinks "everybody knows," yet his contribution would be of value to "somebody."

Editors are requesting papers on the sort of cases most commonly met with in ordinary practice, and probably many valuable hints and expedients fail to reach eager readers because physicians of wide experience and much good "horse sense" imagine that their patients and battles are too common and ordinary—simply things that "everybody knows all about." Much good information is lost, therefore, by the silence consequent upon such a thought. It has brought about the present state of affairs in the average medical journal (MEDICAL COUNCIL *not* included), where may be found fully three-quarters of the articles treating of things rare and curious and scarcely a quarter mentioning anything about the every-day, the usual and the practical. Some of my professional friends have called my attention to the fact that I have been guilty of suppressing information which they rate highly. This I have done just because I thought "everybody" knew all the facts involved.

One summer I had charge of a large surgical clinic, the cases were mostly wounds, cuts, stabs, contusions and injuries: all dirty and practically all infected. It meant so much dressing and bandage work that there was scant time to give attention to anything but the patient in hand; but it appears that the assistants and orderlies were impressed with the excellent results which followed a very simple (and to them novel) plan of treatment. On the return of the regular surgeon in charge he asked me how it was possible to clean up so many septic conditions so easily and nicely. I told him that standard treatment that "everybody knew" was used, chiefly a solution of aluminum acetate. "Now please go slow, because here is one 'everybody' that never heard of this method," was his reply. Then explanations cleared the air, and now what "everybody knows," or so I had supposed, I give to the reader.

Volumes have been written about the treatment of wounds, but what is here given is well known in expert circles, is as near unfailing as any medical procedure can be, is in use in some of the largest surgical services and, if you are not familiar with its use, your armamentarium lacks a very useful weapon. The rules for dressing a septic (or other) wound might be briefly stated thus: 1. See that the cut is big enough to drain itself. 2. Convert a puncture into a cut. 3. Clean the wound; if dirty, wash with 2 per cent. solution washing soda, well boiled; if oily or greasy, cleanse with benzine or gasoline. 4. Paint everything round about and inside with tincture of iodine, one part, and alcohol U. S. P. three parts; wood alcohol smarts, therefore it is best to have prepared a one-quarter strength tincture made with ethylic alcohol and keep in a rubber-corked bottle; this is

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easily carried in a satchel, as a 2-ounce vial full is much more than enough. 5. Soak gauze in the solution of aluminum acetate, hereafter to be described; have it well wet; one can hardly apply too much, so use many layers. 6. Cover the wet gauze with anything that will prevent evaporation, as the solution is only effective when wet: Use paraffin paper, table oilcloth, enamel cloth, oil silk, gutta-percha tissue, etc.; if you have nothing better use several layers of brown wrapping paper soaked with oil, butter or lard. 7. Make a sufficient number of turns with a bandage to secure all in place. 8. Leave the dressing alone for a week or ten days, unless there should be a very excellent reason for its removal and change; such as a temperature above 100° F., soiling, displacement, pain, pressure symptoms, etc. If, for any reason, you disturb the bandage to any extent, remove it and replace it with a new one, proceeding step by step as at the first application.

Many uses for the aluminum acetate solution will be apparent. It may be poured through a speculum into the female vagina or used as an injection in the male urethra. It may be applied in the dressing of pararotomy wounds. In fact, it will fill all the indications where a soothing astringent antiseptic is desirable. Five-drop doses every hour in sweetened water will check diarrhea, but if one is not careful to stop the medicine when the diarrhea stops then it overchecks.

The solution of aluminum acetate is the most satisfactory and the most economical application for all-around working purposes. Simply have (say, a half dozen) powders made each containing alum, ℈ss and plumbi acetas, ℈i; carry one or two of these in your satchel and, when you wish to use them, put one in a quart of boiled water; then the sulphate of lead will go to the bottom of the containing vessel and a 3 per cent. solution of aluminum acetate will be the supernatant liquid. Should you wish the milky liquid clear, add a few drops of acetic acid and let it stand.

Summary.

Write something. Produce your "worldlet." A few words from you about something that "everybody knows" are valuable. Take aluminum acetate, for example. Used much, but might be even better known. Take cuts and bruises. If you have some diluted tincture of iodine, a certain powder, ordinary gauze and can procure water, you will have all that is requisite to make your dressing cheap, effective, portable and antiseptic; and your wound-healing will be satisfactory. The liquid may be sprayed from an atomizer or by turning the atomizer upside down it may be driven out in a stream, for example, through a speculum against a cervix; or it may be used, with a urethral syringe, in the gonorrheal urethra.

128 West Eighty-sixth street.

The Art of Prescribing.

By HENRY B. HEMENWAY.
EVANSTON, ILL.

The supreme test of the ability of a physician is not to be found in diagnosis, but rather in prescription. In these later days the real diagnosis is frequently made by an individual who has never obtained, and who never will obtain, the degree of doctor of medicine, and who never will be recognized as a licensed practitioner of the healing art. It is the chemist and the bacteriologist who tell the physician what the ailment is, and these scientists are often more to be depended upon in such a matter than he who has turned his attention to the care of the sick. Diagnosis should be definite, for it should be a product of science. Therapy is an art, but it should be based upon science.

Therapeutic nihilism among physicians and self-medication among the laity are the fruits of ignorance. A wise man may also be ignorant, and the wiser he may be in one line the more dangerous may his ignorance prove. The fact that a man is a good surgeon does not tend to indicate that he is a safe physician. Even the leader in the general practice of the healing art very frequently fails to keep posted as to the development of "preventive medicine," and his advice in public health matters may, therefore, be far from safe.

A painter who understands the chemistry of his colors has a manifest advantage over the mere artist; but as an artist the tyro may possess the more vivid imagination, the more delicate touch, and the clearer perception. The real art of the physician is the product of experience. Science may give him suggestions, but experience alone can give him the clearness of perception and delicacy of touch which mark the genuine artist.

Unfortunately, the art of prescribing has been neglected. Its true importance has not been recognized. Its Cinderella virtues

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have been obscured by the big sisters, Surgery, Chemistry and Bacteriology.

The physician as a scientist studies the disease; as an artist he should study and treat his patient. This is fundamental. Such a question as "How do you treat pneumonia?" indicates ignorance at the very foundation of a physician's preparation for his life-work. Even though each may have become victims of the same strain of the pneumococcus, the treatment must differ radically for patients of a full-blooded, well-nourished constitution, from that for an anemic, nervous person; or for one whose products circulating in the system of chronic alcoholics.

Again, the patient must be treated differently according to the progress of the disease. The condition which we call health is made up of many elements. If we represent these by letters, we may express the foregoing statement as an algebraic formula, thus:

$$a+b+c+d+e=H(ealth).$$

If now we add to the second term of the equation m, representing the morbific effects, we must also add to the first term r(emedy) to keep the equation balanced. Thus:

$$a+b+c+d+e+r=H+m.$$

If r is not reduced in proportion to the disappearance of m we shall have a lack of balance in the equation, which may be expressed by dividing the r into t(herapy) and p (oison). (r=t+p.) In other words, any drug which is given without therapeutic reason is a poison, and any excess of drug given, more than the case demands, is poison. From the nature of the case, therefore, the therapeutic portion of the remedy can never exceed the morbific effect of the disease. Granting that the proper remedy has been selected, unless the remedy equals the morbific effect the element p will be O. It also follows that with the disappearance of m the power of t becomes O.

Whenever p has a positive value, that is, whenever more of a drug is given than is necessary for therapy, the original equation loses its balance. To preserve the balance Dame Nature attempts to add h(abit) to the second term, making it read:

$$a+b+c+d+e+t+p=H+m+h.$$

This effort of nature will be the more successful if the decrease in the value of m has been gradual. When m becomes O, t will also be eliminated, and the equation will read:

$$a+b+c+d+e+p=H+h$$

In other words, especially in chronic cases, unless the treatment be changed according to conditions, after the disease has been removed there will be left a permanent drug habit.

There are certain elements of indefiniteness in the use of drugs for remedial purposes which have not received as much attention as they deserve. While combinations are often advisable, the dosage of the individual drugs should be varied independently. He who constantly uses a ready-made combination loses sight of the effect of the individual drugs in the mixture, and not unfrequently he gives in such a mixture a drug which is contraindicated in the case under treatment.

Definiteness as to strength is essential for surety of action. If a drug contains 50 per cent. of impurities, the size of dose must be doubled for the same result. If the impurity is harmful, the ill-effect may more than counterbalance the beneficent action of the remedy. The pharmacopeia fixes a standard of strength. This does not, by any means, indicate that the drug which you purchase will be of that strength. In glancing through the reports found in the Bulletin of the Indiana State Board of Health, for example, one is struck with the fact that not seldom the strength of the drugs tested is less than 60 per cent. of that required. Physicians who do their own dispensing are especially liable to be thus victimized. They are the prey of cheap supply houses, and cheap prices mean cheap goods. Nor is the fault thus confined to firms ranked as doubtful. One very prominent firm, whose name is supposed to be a guaranty of purity, has in its price list often two grades of drugs. One is marked "pure," and the other "highest purity." There is nothing in the price list which I have seen indicating that the "pure" drugs are below the U. S. P. standard, and many honest persons are misled into supposing that the cheaper drug is of standard strength.

A tablet, especially if old, is of slower absorption than a solution. The effect of the same dose of sodium salicylate in solution, or in tablet form, therefore, differs. Indefiniteness in action, therefore, results from lack of care as to the form in which a drug is used.

Again, because phenol salicylate (salol)

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is insoluble in the stomach under normal conditions, a pill composed largely of that ingredient will be of little use in the stomach.

Even "when tightly corked," both organic and inorganic drugs may frequently undergo chemical changes. Drugs may, therefore, vary in therapeutic effect with age. A drug a year old must be considered of uncertain value, generally speaking.

Unfortunately, one of the most common sources of unsatisfactory therapeusis is a lack of clearness in perception as to what is needed—a lack of scientific basis for the art. It is useless to give pepsin in amylaceous dyspepsia. Likewise, when the fault is in the intestine, results are not so sure if a remedy be given which is absorbed in the stomach. The treatment for thrombosic apoplexy should be the reverse from that for hemorrhagic apoplexy, yet I have seen patients suffering with cerebral thrombosis, with heads raised, and treated with cardiac depressants.

A BRIEF STUDY OF THE IMMUNE SERA.

By WALTER RENDTORFF,
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PART III.

Wassermann Test for Syphilis.

The study of hemolysis and bacteriolysis has at least evolved a very valuable method of diagnosis, namely, the Wassermann test for syphilis. This test depends upon the fixation of the complement (see A 2, Fig. 2, July COUNCIL, p. 254) when syphilitic antigens are acted upon by their specific antibodies. I will briefly indicate the technic of the procedure. For an understanding of the same it will be necessary to read what has been said in regard to hemolysis and bacteriolysis, and my remarks are somewhat abridged owing to this reaction having been so covered by Dr. Conant in the last issue of THE COUNCIL.

For making the test the following materials are required: (1) Fluid containing syphilitic material, same being best derived from the liver of the fetus; (2) serum or cerebrospinal fluid from the patient to be examined; (3) hemolytic antibody, that is, inactivated serum of a rabbit immunized against sheep blood cells; (4) sheep blood cells; (5) complement, that is, fresh normal serum from a guinea pig. The test is divided into two parts: In the first, serum or cerebrospinal fluid from a syphilitic suspect (antibody) is mixed with an extract of a syphilitic organ (antigen) and normal guinea pig serum added. This mixture is now allowed to stand an hour at a temperature of about 37 degrees Centigrade. Now, if the patient has syphilis, the antibodies of his serum, or spinal fluid, according to which was used in performing the test, will bind the antigen to the complement of the guinea pig serum. For an understanding of what takes place let me refer you to Part II, in which binding of the complement to the bacterial or blood cell by the inter or immune body was fully explained. How, though, is it known whether or not the complement was bound in the first part of our test? This brings us to the next step, namely, the hemolytic test of the primary mixture. In order to perform this we add a suspension of sheep blood cells and the inactivated blood serum of rabbits, immunized against sheep blood cells. In the latter the complements have been destroyed by heating the serum to 55 degrees Centigrade. If, now, the complement in the first part of the test has been anchored, there can be no hemolysis of the sheep cells. In other words, the test is positive; the serum of the patient examined contained syphilitic antibodies. Should these antibodies, however, be absent there will be no binding of the complement. This complement has the power, though, of reactivating the inactivated rabbit blood serum in the second part of the test, thus causing solution of the sheep blood cells. In such a case the Wassermann test is negative. Although a positive test is confirmative of the existence of syphilis, a negative result is not to be looked upon as an absolute index that syphilis is not present. It will readily be seen that the test is highly complicated and consequently requires the utmost care in carrying it out.

Precipitins.

In the study of the hemolysins and bacteriolysins we confined ourselves only with the results obtained by injecting cellular substances (blood or bacteria) into the blood. What follows when soluble albuminous substances from one species are injected into the blood of another species? On injecting a rabbit with serum from the horse it was found that on withdrawing a little of this serum and mixing it with horse's serum, a precipitate was formed.

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This power is a very extensive one, being possessed by many animals when injected by foreign dissolved albuminous substances. The substances which develop in the blood and cause the precipitation are called precipitins. They are in the main the result of specific reaction; that is, the blood of the rabbit injected with the serum of the eel will produce a precipitation only in the homologous serum (serum of the eel). It is possible to produce precipitins for a variety of body fluids and for bacterial free filtrates of various cultures. Thus one can produce a serum which will precipitate the caseine in milk, and, on the other hand, a serum will cause a precipitation in a bacterial free culture of the typhoid bacillus. The precipitins are quite resistant. Their action is not lost until a temperature of 70 degrees Centigrade is reached. Unlike the bacteriolytic and hemolytic sera when the power of producing precipitation is once lost it cannot be restored by the addition of normal sera. Ehrlich classes the precipitins among receptors of the second order. To illustrate the important results of these studies, let us call attention to the fact that we owe by far the most sensitive test for human blood to the precipitin reaction. Whereas, formerly, with the ordinary chemical tests, it was not possible to secure blood reactions in dilutions of over 1:1000, it is now possible to demonstrate blood in dilutions of 1:50,000, with the one exception of the monkey, whose blood may give the precipitation reaction. With an antihuman serum it is also possible to state whether the blood examined is human or not. The blood to be examined may be months old without interfering with the test. The importance of this from a medico-legal standpoint can readily be seen. In making this test (Wassermann-Uhlenhuth) it is first necessary to develop an antisera. Rabbits are made use of, being injected with human blood serum in gradually increasing dosage for a period of about a month. At the end of this time blood is withdrawn, defibrinated and the serum used for the test. The suspected blood clot having been dissolved in normal salt solution about twice the amount of the specific serum is added. If the blood is that of a human being precipitation occurs. The precipitin test is also capable of a number of other practical uses, such as the detection of horse meat in sausage, for instance.

Can Pneumonia be Aborted?

EDITOR MEDICAL COUNCIL:

I have at last discovered what I have been looking for; and that in an article written by Dr. W. N. MacArtney, of Fort Covington, N. Y., and published in the August number of THE MEDICAL COUNCIL, in which he discusses this question in part but sufficient to prove that pneumonia can be aborted. Reading this article, which I found very interesting and instructive, the manner in which I used to deal with pneumonia was presented to my mind to the extent of remembering the exact prescriptions used.

I spent eighteen months in a doctor's office before I attended my first course of lectures. The time in this office enabled me to read and study and recite what I could of the seven text-books, even wading clear through the United States Dispensatory, and I am sure my "sticktuitiveness" was strained at that time, and has been ever since, for I never tackled such a large book before and never will again if I continue mentally normal.

My preceptor was a very stern and emphatic man, and, when he said that such and such would cure certain diseases, I knew better than to hit back. In one of these office lectures he gave me his treatment for pneumonia—and I think this came soon after I entered his office as a student under his tutelage, which was when I was about nineteen years of age—and when he said that is the way I handle pneumonia, he would impress you with the fact that it was the way—*and the only way*—to successfully treat a case, or cut it short. So here it is:

℞ Pulv. Doveri.
Hydrarg. chloridi mitis.
Pot. nitratis, aa grs. 30.

M. Div. Ch. No. 3. Sig.: One in syrup every three hours, until all are taken; follow with one tablespoonful oleum ricini in two hours after taking the last powder.

℞ Vini antimonii.
Vini impecacuanhæ.
Tr. opii. camph., aa oz. 1.
Syr. tolutani, q. s. ad., oz. 4.

M. Sig. One teaspoonful every two hours, until slight nausea is felt; lessen dose but keep patient a little nauseated, in order to produce free expectoration.

In addition a very hot pedaluvia was ordered, and the patient kept very warm. One can readily see that diaphoresis would be in evidence very well marked, and also elimination established by all secretory avenues. Another thing, he would always re-

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sort to the old-fashioned fly blister, when the proper time came, to assist in getting rid of effusion.

I must say, in justification to my old preceptor, that he was a very successful practitioner, and a man of rare intelligence. His mainstay in case of collapse was good whisky. I have seen many of his cases make almost a phenomenal recovery, and have also had excellent results with this treatment myself in pneumonia. It will be observed, that at this time there were no such remedies as antipyrine, and the coal-tar products; the only antipyretic we had the least confidence in was quinine, and it is a question even now whether it acts in that way. I can hear some of my readers saying: "Why! Doctor, didn't you or he have some difficulty in getting your patients to take such large doses—such horse-like quantities?" We only have the same excuse to offer: such a thing as capsules were unknown to us as far back as thirty years ago, and this was the best we could do.

I often think were I to contract pneumonia I would suggest to my wife to have the attending physician give me just the treatment herein outlined—for my faith in it is great; and I cannot help but believe that, if medicines were not handled so gingerly in treating such cases a greater number would recover. I am always impressed with this fact every time I read of a Congressman or a prominent man dying of pneumonia. I must admit that recently I have treated cases of pneumonia with the modern remedies, but never have used the serum.

GEORGE B. SIMPSON, M.D.
Parkersburg, W. Va.

Medical Books That are Worth While.

Our editorial in September COUNCIL, on the subject of Medical Books of the present day, has touched a sympathetic chord among the practicing physicians of the country, if we may judge by the number of responses received from all quarters, commending it, asking for reprints and suggesting that we go further on the subject.

In that article we pointed out the futility of any one man's trying to cover the entire range of the practice of medicine in a single library volume; the prevalence of rehashed matter, put in by assistants or secretaries, about which the reputed author knows little or nothing in most of our rapidly-multiplying medical books; the comparatively useless character of the encyclopedic "systems," "text-books," and other such many-volumed works, whose editor supervises the sections of the different contributors; and the fact that the only books that are of lasting value are those written by men who experiment patiently and observe closely for years in a single branch of medical science, and publish for the benefit of the profession the practical results of their investigations and observations.

Judged by such a standard, the number of new medical books would not be large, and one buying a new book could be reasonably sure that it contains what he has not read before.

But it is of little use to criticise unless we can do some constructive work to make things better. This we shall endeavor to do.

One of the letters of commendation was from Dr. Henry B. Hemenway, of Chicago. We wrote him asking him to name some of the recent books which he thought of the greatest benefit to the general practician, as helping him to lay a foundation of facts, thoughts and methods that would best help him in his professional work. The request we made of him we now extend to all our readers. What book or books have helped you most?

Dr. J. J. TAYLOR,
Philadelphia, Pa.

My Dear Doctor: In answer to your queries of the 14th inst. relative to books, I fear that I can not comply exactly with your wishes. As a rule, I am not much in favor of the class of books which are considered "thoroughly practical," in that they tend to take the place of thought on the part of the practitioner. Especially to be condemned are books which consist largely of prescriptions.

The physician should aim to keep up to the times chiefly by attending the medical societies, and reading the best medical journals. Even though he may not expect

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to do laboratory work himself, he should get and read such a hand book as (2) Faught's "Essentials of Laboratory Diagnosis." He should occasionally get such an up-to-date aid as (5) Ruhrah's "Manual of Diseases of Children." Scudder's "Fractures," (3) and (6) Binkham's "Operative Surgery" may well be taken to represent another useful class. These books, especially in diagnosis, help to show a man his own limits, and prepare him to appreciate when he should call upon others and how to estimate the work of others.

I have found most useful suggestions in Sainsbury's "Drugs and the Drug Habit" (imported by Dutton). Wright's "Studies in Immunization" (4) is very valuable if the reader has an education which enables him to understand, but most of the older men may find difficulty.

Mental healing demands attention, but most physicians will be satisfied when they read one of these books once. It would be well if they might all have the advantages of a circulating library for such reading. In this line I like these three as well as any of the multitude upon the subject. Cutten's "3,000 Years of Mental Healing," DuBois' "Self Control and How to Attain It," Charles Brown's (Oakland, Cal.) I think the title is "Mental Healing." Dr. Howard's recent (1) book on "The Fly" should be in every physician's library. Boyce's "Mosquito or Man" (8) is another good book, giving, as it does, a general view of one field of preventive medicine in a very readable form.

I should mention (7) Macfee's "Air and Breath" as a book which gives something hardly brought out in the journals.

Trying to comply with your question, and as indicating my selection for a busy *practitioner* without too much gold, I will check by numbers showing my judgment of relative values.

Yours truly,
HENRY B. HEMENWAY, M.D.
Evanston, Ill.

If our readers desire explanation of any obscure points in any article in THE COUNCIL, they should address the author direct, enclosing stamp for reply. What is obscure to you may be so to many others. The author may reply direct, or he may address all at once through a further article in THE COUNCIL.

It is important that any subscriber who changes his location should at once notify us of his change, giving his old address also, so as not to miss any numbers of THE COUNCIL.

Hyoscine, Morphine, Cactin and Cocaine Anesthesia in Tonsil Operations.

By H. S. REGER, M.D.,
IRONTON, OHIO.

The frequent manifestation of unpleasant constitutional symptoms following the use of cocaine as a local anesthetic in various surgical procedures, especially in the tonsil operation in adults, led me to try hyoscine, morphine and cactin as a preliminary to cocaine anesthesia, as I have used it successfully as a preliminary to chloroform anesthesia as anesthetist at the Keller Hospital for four years past. Reichert asserts that morphine is the best antidote for cocaine poisoning. In combination with hyoscine it exerts marked tranquillizing effect on the mind of the patient, who has been rendered extremely nervous by the mere thought of an operation. It also inhibits the perception of pain impulses by the brain, consequently the amount and strength of cocaine required for local anesthesia is lessened.

I consider the complete enucleation of the tonsil, whether under a local or general anesthetic, as a hospital operation, and never perform it anywhere else. In doing the operation under a local anesthetic I use my patient's bedroom as an operating room also. An hour before the time for the operation the nurse is instructed to give the patient hypodermically a full strength hyoscine-morphine-cactin tablet. At the end of that time swabbing of the throat with solutions of cocaine, preliminary to the cocaine injection, is unnecessary. I use the following solution for injection into the tonsil and adjacent tissue:

℞ Cocainæ	.12
Adrenalin (1-1000)	1.50
Aquæ, q. s.....	6.00 m.

The whole of this solution is taken up into a suitable hypodermic syringe, and one-half of it is injected into each tonsil at six different places, as follows: At the margosupratonsillaris, at the base of the tonsil, and twice into different portions of the anterior and posterior pillars between these two parts. In ten or fifteen minutes the patient is ready for operation. The patient occupies a bed, and, supported by the ordinary hospital lazy-back, with a pillow or two for comfort, is placed in a semi-recumbent position during the course of the operation. The sleep induced by the

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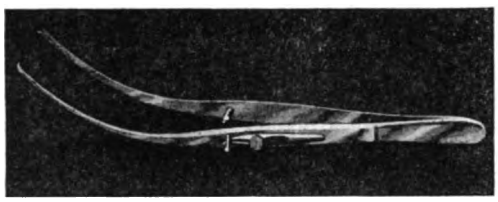
morphine and hyoscine is not so deep but what the patient can be readily roused and instructed to open the mouth when necessary.

In this connection I would like to say a few words regarding the technic of the tonsil operation. Three steps are most important to make it simple and successful: first, the induction of complete anesthesia; second, properly grasping the tonsil with forceps preliminary to its dissection;



DR. REGER'S TONSIL FORCEPS.

third, the separation of tonsil from the anterior and posterior pillar and cutting through mucous membrane at the margosupratonsillaris.

Anesthesia is complete when the technic above described is carried out. A tonsil forceps of my own device, and which I have found particularly serviceable in this operation, is reproduced herewith. One blade of the forceps grasps the tonsil at its base, and the other blade grasps it at the margosupratonsillaris. The tonsil is then drawn strongly toward the median line of the pharynx. For dissecting the tonsil I use a Tydings' tonsil knife, with its distal end sharp and pointed, instead of blunt, as originally devised by Tydings. When severed of its connection with the anterior and posterior pillars and at the margosupratonsillaris, the tonsil is readily pulled out of its bed. A Tydings' snare is then passed over the forceps to the base of the tonsil and the tonsil snared off. Hemorrhage is but very slight.

Some Effects of Anesthetics Upon the Blood.

By B. F. KAUPP,
Professor Pathology, Div. Vet. Sci. Colo. State College and Pathologist to the Colo. Agri. Experiment Station.
DENVER, COLO.

That certain anesthetics have a marked effect upon the blood cannot be denied. The difference in clinical results can probably be partly explained by variation in the technique (particularly in chloroform and ether) of the administration of the anesthetic, as the volume given and the duration of the anesthesia.

In ether anesthesia the hemoglobin gradually falls. If the patient be kept under ether anesthesia for one hour the hemoglobin will be greatly reduced, and records show, in some cases, as low as 50 per cent. Erythrocytes are rapidly destroyed or reduced in number, indicating, in some instances, vigorous and quick hemolytic action. For these reasons it has been advocated that ether should not be used as a general anesthetic when the hemoglobin content is below 50 per cent. After the use of ether as an anesthetic it is found that the restoration of hemoglobin is less rapid than that of the erythrocytes.

The increase in the number of leucocytes varies from 6 per cent. to 73 per cent., and occurs during anesthesia. This leucocytosis is transient. The leucocytes usually return to normal within twenty-four hours.

In chloroform anesthesia there is also a marked effect upon the erythrocytes, and especially upon the hemoglobin content. The leucocytosis produced by chloroform may persist a trifle longer than that from ether. There appears to be some relation between the amount of anesthetic used and its rate of elimination from the body, and the leucocytosis. Chloroform also has a tendency to lower the coagulability of the blood if used for long periods.

The results of some investigations conducted in this laboratory to determine the effect of chloroform, ether and hyoscine, morphine and cactin upon the power of phagocytosis of the blood, and upon the blood-cells, were presented at the annual meeting of the American Veterinary Medical Association held in San Francisco, September, 1910, and published in the *American Veterinary Review*, No. 1, Vol. xxxviii. All experiments were conducted upon dogs.

A brief review of this chart shows that morphine reduced the powers of phagocytosis of the blood fully 50 per cent. Observation No. 98, which was the first of the ether series, shows a reduction in hemoglobin and erythrocytes with slight leucocytosis, which persists at the end of twenty-four hours. The power of phagocytosis was greatly reduced. The average number of cocci per polymorphonuclear leucocyte before anesthesia was 4.0; after being un-

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der anesthesia one hour 2.5 cocci per polymorph. and 3.5 cocci per polymorph. after twenty-four hours.

Observation No. 99, or the second of the ether series, shows a marked reduction of hemoglobin and erythrocytes at the end of one hour under anesthesia, which had not entirely been restored at the end of twenty-four hours. The power of phagocytosis is also noted to be affected, showing similar results as in the preceding experiment.

Observation No. 100: the first of the chloroform series shows a reduction in the hemoglobin and erythrocytes, which had practically been restored by the end of twenty-four hours. The average number of cocci per polymorph. before anesthesia was 4.7. After the animal had been under the anesthetic one hour only 2.0 cocci per polymorph. was the count, again indicating marked influence on phagocytosis. At the end of twenty-four hours 3.6 cocci per polymorph. indicated that the phagocytic power at that time had not entirely been restored.

Observation No. 101, or the second of the chloroform series, shows a similar result, viz: a lowering of the hemoglobin and erythrocytes, with a slight leucocytosis at the end of one hour under anesthesia. The power of phagocytosis showed 3 cocci per polymorph. before anesthesia and 1.8 cocci per polymorph. after the animal had been under the anesthesia one hour, with 2.9 cocci per cell at the end of twenty-four hours.

The results obtained in this laboratory with hyoscine-morphine-cactin are different from those obtained with morphine alone, and somewhat different from ether and chloroform. The results show no loss in hemoglobin or erythrocytes, with a slight leucocytosis, which persisted after twenty-four hours. Thus observation No. 96, which was the first of the hyoscine-morphine-cactin series, showed 6,100,000 erythrocytes before anesthesia, with 6,300,000 after the animal had been under the anesthesia one hour, with 7,120,000 after twenty-four hours. (In all these tests the animals were kept under anesthesia for only one hour.) In this experiment it was found that the average number of cocci per polymorph. before anesthesia was 7.6; after the animal was under anesthesia one hour, 3.4, and at the end of twenty-four hours, 7.5, showing an entire recovery of the power of phagocytosis.

Observation No. 97, the second of the hyoscine-morphine-cactin series, shows 3,800,000 erythrocytes before anesthesia, 4,200,000 one hour after the animal was under the anesthesia, with 5,000,000 after twenty-four hours. The number of cocci per polymorph. was 7 before anesthesia, with an average of 3.2 after one hour under the anesthesia, and 6 cocci per polymorph. after twenty-four hours.

In conclusion, it may be stated that, while hyoscine-mophine-cactin has a similar effect upon phagocytosis as ether and chloroform, its phagocytic powers are practically entirely restored in twenty-four hours or less; and that the effects upon hemoglobin and erythrocytes are stimulative rather than destructive. It would appear that hyoscine-morphine-cactin is more advisable for this reason than any other anesthetics we have tested.

Belladonna Treatment for Drug and Alcoholic Addiction.

Dr. Ross Moore, of Los Angeles, Cal., considers that while the belladonna treatment for drug and alcoholic addictions is complicated and difficult, the ultimate result is excellent. The Towne-Lambert treatment consists in the hourly administration of a mixture of belladonna, hyoscyamus and xanthoxylum (prickly ash), in connection with increasingly vigorous catharsis at stated intervals.

To get results the atropine mixture must be pushed to its physiological limit and not beyond. To fall short of this point spells failure to remove the craving for liquor or a habit-forming drug, while to cause poisoning means bringing the treatment to an abrupt end through the unwillingness of the patient to continue the taking of the belladonna mixture. Thirty or forty hourly doses are given until a "typical stool" is produced, at which time the patient emerges into a very unusually comfortable condition with little or no craving remaining. The case is only half cured when the craving is obliterated, and the after treatment is of the most importance, as a clear-cut psychic analysis of the patient must be made. Alcohol-free tonics must be prescribed, and the patient must be kept under observation for at least six months.

A Local Antiseptic.

Dr. J. R. Gilbert, of Alamogordo, N. M., successfully treats infected wounds with the following solution:

℞ Guaiacol,
Ichthyol, āā 3j.
Glycerine to make f℥j.

—*New Mexico Medical Journal.*

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The Business Side

OF MEDICAL PRACTICE

While we, as physicians, desire to be scientific students and practitioners of medicine, yet we desire also, for the welfare of our dependent ones and for the sake of our standing in the community, to secure a fair compensation for the services we render to our fellowmen.

Worthless Life Insurance Stocks.

In our September issue we made brief allusion to the very riot of rotten life insurance promotions now taking place all over our country; the Middle West and South being more extensively victimized than the rest of the country. Exception was taken to these remarks by certain officials of the Empire Life Insurance Co., of Seattle, Wash., in a communication to us, claiming that we were not well informed in regard to life insurance matters.

If we remember aright, the Empire Life Insurance Company, of Seattle, Washington, is the company of which we wrote in our August, 1910, issue, quoting from the circulars which they were distributing in New York State regarding their health bureaus, soliciting physicians to subscribe for stock with the prospect of being appointed on one of these local health bureaus. Their methods, set forth in that circular, were quite sufficient to satisfy any intelligent physician as to whether or not he wished to invest in their stock.

Since the publication of our article regarding the flood of new life insurance companies now springing up all over the country, our position has been completely vindicated by numerous other publications. That excellent magazine, *The World's Work,* in its September number, has an article of nine pages covering the subject very fully and in detail. After reading that article, no one would wish to invest in the stock of any life insurance company that is trying to sell its stock by mail or by canvassing solicitors.

The *Life Insurance Courant* for September 7th (published at Oak Park, Ill.), has two excellent articles, one an editorial and one contributed by Floyd Elmer DeGroat, of San Francisco, California, thoroughly setting forth the rotten methods of the promoters of the wild-cat companies.

Best's *Life Insurance News* of August, 1911, (100 William street, New York City,) contains a full and complete article giving the detailed condition of 141 companies organized within the past six years, having received a total capital of about twenty-six million dollars and paid in surplus of over thirteen million dollars, upon which has been paid out as dividends the sum of $329,853, being about 13-100 of one per cent. instead of the 20 to 50 per cent. promised by the promoters. Even worse than that, the most of these companies seem to have been living upon the money received from the sale of stock instead of upon earnings, as over half of the surplus paid in has been used up in running expenses. This is not a brilliant prospect for a would-be stockholder. When one realizes, however, that in addition to the loss of the money paid in, which the stockholder stands, in some States he is liable further for the debts of the company, it makes one a little timid about investing.

In many of these companies the soliciting agents and promoters keep, from the money paid in for stock subscription, from 25 to 60 per cent. as their "commission." When it is realized that only the little balance that is left will go to build up a life insurance business, and also when it is realized that a new company is under enormous expense in building up its selling force and writing new business, a clear-headed man must see that he would just as well take his money and throw it down the well in the beginning—then at least he would not be harassed by doubts and fears.

The brilliant outline of the promoters about the immense amount of money that the old companies have made may easily be discounted by a list of the failures, more

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than ten to one of the successes, in the history of life insurance within the past fifty years. The stream of commercial history is literally strewn with wrecks of life insurance companies, many of them founded by men of honesty and good business ability, but without the necessary training or equipment for life insurance work.

As a final word, we may say to our readers that it is absolutely unsafe to take stock in any life insurance company that is offering its stock by mail or soliciting the small investors. If any parties wish to organize a life insurance company with their own capital and officers and conduct it themselves, they taking the risk, there can be no reasonable objection. It is only when they call in the general public that we feel like protecting our readers.

A Crying Evil—The Lodge System of Practice.

By F. J. MADDEN, M.D.,
104 Hamilton Avenue,
DUQUESNE, PA.

A subject relating to the business side of medical practice, demanding our serious attention before too late, is the alarming increase of lodge practice; a cheap system of medical treatment that is threatening the dignity, honor and standing of the medical profession and lowering the fees to that of the common laborer.

Lodges of a number of fraternal organizations, employing an unethical class of physicians under contract, at about $2.00 a family per year, are being rapidly organized in every city and town. They furnish their members with a cheap system of medical treatment or service that is threatening to gradually supplant the time-honored family physician, not only depriving him of his rights to practice, but also denying the unfortunate victim of disease that prompt and careful attention necessary to restore him to health.

Only the physician that is properly compensated and has the sole interest of his patient at stake can afford to devote the time, skill and attention demanded to properly care for the sick. The lodge doctor, from the very fact that he is hired at a very low fee and must attend a large number who do not hesitate to call him for the most trivial affliction, acquires a careless, irresponsible method of practice, because he feels that it does not justify the time and attention he would devote to his regular practice. He thus injures the standing of the profession, retards the advance of medical science that would result from careful observation and study, and neglects his patient.

The overcrowded condition of the profession is squeezing us hard. The temptation to accept appointments in lodge practice is becoming greater, especially for the young man, just entering upon his career, who views it as a special opportunity to gain a practice. As long as the system continues, so long will doctors accept.

It therefore becomes our duty to destroy this microbe that is threatening the honor, dignity and very existence of a legitimate profession and endangering the welfare of the public.

About five years ago, the local medical society, of which I have the honor of being a member, passed resolutions denouncing lodge practice and forbidding members from accepting appointments as lodge physicians. The lodges quickly resented the action and endeavored to induce our members to violate their agreement, but we stood "pat" and we still stand "pat." They, however, secured the services of an unethical individual from a neighboring town. We understand he receives the magnificent fee of about $2.00 a family per year to dispense his service to two lodges at this place. He is compelled to cross the river, pay bridge toll, and travel from three to five miles from his office to visit his patients. He is still "on the job," we presume, because his regular practice has not increased to that extent that it seriously interferes.

At the time of his appointment we made a special effort to persuade him to not accept, but to no avail. We hoped he would some day realize his position and resign, but he has proven too narrow-minded to even consider it. Unfortunately for our profession, there are too many of this type among us.

Quite a number of families are still within the fold of the lodges, good, bad and indifferent. The heads of some of the families are spending their time and money in the booze clubs attached to the lodges, permitting their wives and children to

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suffer for the necessities of life. The dead-beats whom we have listed are taking refuge under the protecting wings of the lodges and lessen our opportunities for collecting old debts.

Gentlemen of the profession, is there a remedy, or must we stand back and permit this lodge system of practice to thrive? Is it not time that we awaken, stand shoulder to shoulder and make an effort to abolish it? Is there not some method by which both the interests of the public and that of ourselves can be saved from the inevitable results of such a system? Overcrowding of the profession, with increasing cost of living, demands serious consideration for the future.

On the part of the public, efforts are of course being made to reduce the cost of medical services, and lodge practice is one of the methods adopted. But does the lodge, as conducted under this system, actually accomplish any saving for its members? Is it not a fact that the majority of men who join the lodge do so from no other motive than to embrace the opportunities of membership in the clubs, where intoxicating liquors are sold? The members spend many times the difference in cost of regular, legitimate medical service and that of membership in the club, not considering the difference in the kind of service and the fact that the families of these men must, in many instances, be deprived of the necessities of life. The member of the club also damages his own health by excessive use of alcohol, loss of sleep and rest incident to late hours spent at the club, predisposing him to disease and a short life. The evil effects of the club are too numerous to mention. Wherein is the saving, and where does the actual difference go? You will agree with me: it goes to the liquor interest that fosters and encourages the clubs. We are deprived of our practice, the member and his family of honest medical service, health is ruined and, in many cases, the family denied a decent living.

We owe a duty to society and to ourselves to abolish lodge practice and the influence of the club, whose membership is usually gained under the guise of economy in medical service and of fraternity, but it is nothing short of deception, to shield a desire of enjoying the privilege of the booze club.

Let there be sick benefit organizations, the members of which shall receive a proper sick benefit to permit them to choose their own physician. Let the good old family physician continue to administer, with that care and fatherly attention that wins the confidence of his patient and assures success in treatment. But, down with the lodge system of practice.

Dr. Madden vividly describes an evil with which most of us unfortunately are too familiar. Business men in commercial enterprises have learned that, to get the best work from their workers, they must pay them liberally. A worker can only give his best work when he is paid enough to enable him to live comfortably.

This is just as true of the medical worker, the good old family physician, as of any other worker. When the remuneration for services is cut down below this point then the service deteriorates.

So, aside from our merely personal point of view of not wanting to be deprived of our livelihood, we should condemn the lodge system. It must always mean an inferior grade of medical services, which makes it a very dear saving for its patrons and lowers the standard of the profession.

We should all stand shoulder to shoulder and stamp out this evil, which has nothing to commend it.

We hope we shall hear from others of our readers on this subject, particularly those who have had success in getting rid of this evil in their communities.

Idle Land Away from Home—Let Some One Else Buy It.

We have an inquiry before us from a West Virginia physician. He has purchased a lot in an allotment at Niagara Falls, N. Y., and now wonders whether it is worth the purchase price, and if he should complete the payments, or if it would be wiser to lose what he has already paid, and let it go at that.

Now we haven't any knowledge of land values in Niagara Falls, but we do know this: as a general principle it is very unwise for a physician in West Virginia to buy land at Niagara Falls, N. Y. He is at least two hundred miles away from his investment. This particular physician, as is nearly always the case, is admittedly unacquainted with Niagara Falls or land values there. So he has no way of knowing whether he is to get the value of his money from his purchase or not. And it is a good thing to think of that point before buying rather than after.

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Now, if he had bought his lot in his own town in West Virginia, he would have had some acquaintance with local conditions on which to base a judgment of its value. He, also, would have been in a position to take advantage of an advance in price and sell at the profitable time. This he has very little chance of doing with his lot in a strange town two hundred miles away.

Andrew Carnegie's admonition, "Put all your eggs in one basket and watch that basket," should be followed at least to the extent of choosing only baskets for your investment eggs that can be watched, if need be.

It is a strange thing about these town lot bargains in new additions, that they are usually sold far enough away from their location for the prospective purchaser to know nothing about them. The West Virginia man buys New York lots and the New York man buys West Virginia lots. This is because nine times out of ten—and then usually one time more—they are swindles, or at least represent such highly watered fictitious values, that the people in the same community would never think of buying. But the promoter takes his wares a few hundred miles away, writes a glowing description of the operation, shows you the tract just half a block from the busy center of the town (they find this easy in a supposed photographic illustration), and distance lends enchantment, and you bite. If the thing was in your own town you would turn up your nose at it.

And now, to come down to it, just why should a physician invest in a lot anyway? There is no income from the investment. Instead, each year you must pay out for taxes, and often improvements which many times represent an outlay larger than the original investment.

The only hope of a return is, to some time sell it at an advance in price sufficient to reimburse you for the taxes, improvements, and pay the interest on the investment for the years you have held it. This happens very seldom indeed.

Just consider this proposition a minute. The island of Manhattan, on which New York City is situated, is said to represent a land value larger than the entire State of Texas. The money value is in the billions. This island was sold in 1624 by the Indians to the Dutch for beads worth $20. This would seem to be a pretty profitable investment.

Yet if that $20 had been placed to yield 6 per cent. interest per annum, compounded semi-annually, it would represent a sum greater than the present value of the island of Manhattan. This seems unbelievable at first, but if you will make the preliminary steps in the calculation you will soon see how fast the money at interest doubles on itself, and any doubts will be removed.

Some few men make money buying idle land for an advance in price, but they are trained real estate men, thoroughly acquainted with local conditions—usually they have made a life-long study of them. They know of some reason why that particular land will have a rapid advance, as the running of a suburban railroad line or a trolley line through the section. They only hold for a short time and sell out while the advance is still on and the market is good. It is a business to which one has to devote one's whole time to be successful.

For the average physician, unless he wants to build, he can find more profitable investment than town lots, particularly lots in additions at the edge of town, and in other towns than his own.

Better invest in good bonds or mortgages where the interest comes regularly and the principal is available whenever you need it, than swell the profits of the promoter who buys by the acre and, without enhancing the value other than naming the tract, sells it for as much per lot.

Insurance Companies as the Guardians of the Public Health.

As a business proposition it pays for the insurance companies to prolong the lives of their policyholders. With this end in view, the Equitable Life Assurance Society, the Postal Life Insurance Company, and several other companies have established medical departments for the conservation of the health, not only of their policyholders, but also of the public at large. This is much to be preferred to the giving of contributions for political purposes, now so stringently forbidden by law. Naturally, the companies turn to their medical examiners for aid in furthering this project, and it would seem as if the day was not far distant when there would be a cabinet officer in charge of the Bureau of Health of the United States of America.

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Kansas Protects its Citizens.

At the Governor's Convention held in New Jersey early in September, Governor Stubbs, of Kansas, told his colleagues that Kansas has a new law by which any company proposing to sell stock in that State must first undergo thorough examination and obtain license from the suitable State officers. We shall print this law in our next issue, and hope that our readers in other States will see that such a law is passed this winter.

Doctor, it is now about time to be on the lookout for more promising literature from the Sterling Debenture Corporation, of New York. While they apparently have been quiet for sometime, you can depend upon it they are not idle. Ask them to show the record of any company which they have promoted which has made good to its stockholders.

Just a Bit Wild in Their Claims.

We have before us the brilliant circulars of the Dutch Guiana Gold Recovery Co., promoted by J. H. Frank Smokey, of Denver, Colo. If they are correct they are just waiting the word from you, with a "piece of money included," as they put it—a $10 bill or a $1,000 bill will do (the shares are 8c), to make your eternal fortune. They will try to make the return a thousandfold. Very kind of them, to be sure.

But it is a pretty safe rule to follow: the more the circular promises, hold the tighter to your money. Save it for something less promising, but perhaps safer and surer.

The University of Cincinnati's Plan for Teaching Preventive Medicine.

The University of Cincinnati announces a co-operative course of instruction for training medical students in sanitation and public hygiene between its college of medicine and the Cincinnati Department of Health. As the prevention of disease is the ultimate good for which all medical men are striving, and as State medicine will assume larger and larger proportions as time goes on, this course would seem to afford an excellent opportunity for obtaining knowledge which could be advantageously employed for the good of mankind and for securing a competent living in the future.

BEST IDEAS FROM RECENT LITERATURE

The Nutritive Value of Bread.

The report recently presented in England to the Local Government Board by Dr. J. M. Hamill, on the nutritive value of bread made from different varieties of wheat flour is a very careful review of all the work that has been done upon the subject.

The difference in nature and in nutritive value between breads made from varying classes of flour are not of much importance to the average adult with whom bread is only one out of many varied constituents of the dietary. A diet which consists principally of bread, from whatever grade of flour it may be made, is not in accordance with the human needs. But in those unfortunate cases in which practically bread, and bread alone, provides the daily sustenance, there would clearly be an advantage in the use of bread made from flour of the "entire" wheat class, since such flour secures a somewhat larger quantity of mineral matter and of suitably combined phosphorus and other substances, as yet unknown, which may prove to be factors of importance in the processes of nutrition. It is true, however, that bread is our chief source of starchy food, and even the person who is free to choose a mixed dietary eats it as a necessary accompaniment to, or vehicle for, the proteins and fats which make up his meal. But whether we are considering those with whom bread is the principal food, or only those to whose meals bread is a valuable accessory, there is a psychological aspect which deserves more attention than it has yet received. What better meal is there, or what meal that responds more closely to the physiological requirements of the body, than bread, butter, and cheese? And how greatly is its enjoyment added to by bread with the unmistakable taste that we call "nutty?" There is a complete harmony existing between the flavor of good cheese and the flavor of good wheaten bread. But the bread-and-cheese meal, so palatable when the constituents have individual and irreproachable characters, while it becomes nasty if the cheese be nasty, is at once uninteresting and unappetizing should the bread be conspicuously without flavor. The true bread flavor makes all the difference between our enjoying and not enjoying our meal, and, as is well known, when the enjoyment of food is eliminated real food value is greatly discounted, as has been so ably pointed out by Pavlof. The simple and scientific meal of bread, butter, and cheese can be completely spoilt by indifferent bread, even though the other ingredients are satisfactory. It follows that, regarding bread as an integral part of a dietary, it should still have appetizing qualities.

The report contains reference to physiological experiments bearing upon the influence on nutrition of certain constituents of "standard" flour which are absent in white flour. Experiments on pigeons and rats are quoted showing that both thrive better when fed upon standard flour than upon white flour. In the case of the pigeons the birds fed only upon white bread lost weight and suffered from peripheral neuritis, though the addition of yeast to the diet was sufficient to restore them to a healthy condition. We are not

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prepared with an explanation of this fact. In this connection Dr. Hamill refers, as was inevitable, to the work which has been done on the etiology of beri-beri. A diet consisting of rice from which the skin, or cuticle, has been removed may give rise to beri-beri, a condition which manifests itself by polyneuritis and other symptoms. It has been shown that polyneuritis, analogous to that which occurs in beri-beri, can be produced by rice which has been deprived of its cuticle by milling. Moreover, if the "offal" which has been removed from rice, and which amounts to 10 per cent. of the grain, be returned to the rice no polyneuritis occurs. Schaumann concludes that a deficiency of certain organic phosphorus compounds in the grain deprived of its skin has profoundly modified metabolism.—*Lancet*, September 9, 1911.

Russo's Test for Typhoid Fever as Compared with the Diazo Reaction.

The methylene blue test recommended by Russo, of Cantania, in 1905, as having advantages over the Ehrlich's Diazo test in typhoid fever, has not seemed to become as popular as the writer, who devised it, anticipated, while other investigators have expressed themselves in no uncertain langauge as to its having no value at all.

The test is a very simple one. It is made by adding four drops of an aqueous solution of methylene blue (1:1000) to four or five c.c. of urine and shaking it well. If the urine is turbid from excess of urates and phosphates it is filtered before the test is applied.

A positive reaction is shown by an emerald green color. If the reagent does not change color, or only very slightly, the reaction is negative. Between these two extremes there are varying shades of color, as in the Diazo reaction.

According to Russo the reaction is positive in typhoid fever, measles, smallpox, pulmonary tuberculosis in the third stage, tuberculous pleuritis, and peritonitis. It is negative in scarlatina, influenza, pneumonia, polyarthritis, heart and nerve diseases.

The advantages claimed for this test over that of the Diazo reaction are the simplicity of the technique, the durability of the methylene blue solution and its greater diagnostic value.

Rolleston, in 1906, in the *Medical Press and Circular*, reported his observations of this test in seventy cases of supposed enteric fever. Fifty-four of these cases gave the Widal reaction and clinical evidence of the disease, while sixteen were proved to have other diseases Of the fifty-four cases the urine responded to Russo's test in forty-four. Of the sixteen cases, four gave a positive reaction, one of carcinoma of the stomach, two of infective endocarditis, and one of lobar pneumonia.

Rolleston's conclusions are: that methylene blue gives a more constant and persistent reaction in enteric fever than the Diazo test; that its disappearance from the urine coincides more closely with the beginning of lysis, and so it is a surer sign of convalescence; it is more frequently present in relapses; its diagnostic value is equal, but not superior, to the Diazo.

In twenty cases in which both tests were made, in fourteen the two events, disappearance of reaction and lysis, occurred in the same week and in six lysis began the week following the disappearance of reaction. In both tests there is a diminution of the color intensity before it disappears entirely. In secondary infections in typhoid fever the reaction may disappear even when the general condition is aggravated.

In the same year Dr. Reinold Junger published an article in the *Deutsche Medicinir Wochenschrift*, in which he showed to a much greater extent the comparative value of the two reactions, as studied on eleven hundred various urines.

Six hundred and forty-seven of this number were negative to both tests. Of the remaining 453, 105, or about one-fourth, gave both reactions, and in 348 he found a positive blue and a negative Diazo reaction in 207 cases, and the reverse in 141.

In seventy-eight cases of typhoid fever Russo's test was positive in thirty-five, and the Diazo in twenty-two. In measles the proportion of Diazo reactions to methylene blue were 35:11; in advanced tuberculosis, 755:74; in gland tuberculosis, 12:2.

Junger finds this test useful in a far greater number of diseases than is the Diazo, and he considers it superior both as regards its diagnostic and prognostic properties.

The positive or negative reaction depends upon a mixture of colors and not upon a chemical reaction. It is decided by the greater or less amount of color in the urine. The blue unites with the dark yellow coloring matter of concentrated urine and produces a more or less green color. If less concentrated the urine is lighter green; if clear, it remains blue.

He estimates that the yellow coloring matter in normal urine is 0.15 per cent. urochrome. Up to 0.4 per cent. Russo's test is negative; between 0.4 and 0.6 the reaction is blue green and over .6 per cent. it is always positive.

The Treatment of Malignant Tumors with Actinium.

On account of its great cost the treatment of malignant tumors with radium is out of the question except in those rare instances where the patients are under the care of a radium institute devoted to the handling of this kind of patient. Professor Czerny and Dr. Caan,[1] of Heidelberg, found that rabbits injected intravenously with 1½ grains of thorium nitrate died in convulsions in two or three seconds after the injections, while those injected subcutaneously lived for several hours. It was, therefore, decided that it would be unsafe to try this preparation on man. The experiments with actinium, which costs in Europe a dollar a grain, were quite different. Two grains given subcutaneously caused no special untoward symptoms and in course of a week the animals even gained in weight. As this substance itself is insoluble, intravenous injections were not given. One part of the brownish-red powder was suspended

[1] *Münchener medizinische Wochenschrift*, August 22, 1911.

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in 20 parts of a physiological salt solution, and the emulsion injected directly into the tumor. This remains *in situ* for a long time, as may easily be demonstrated by the X-rays. The commencing dose was 1/8 of a grain, and this was increased to 1½ grains or even higher, until ten injections had been given. Eight to ten hours after the injections there occurs considerable of a reaction, consisting of swelling, redness, rise in temperature, etc. Only in one instance was there a chill. In all, twenty cases were treated, of which twelve were recurrents of the breast and two carcinoma of the rectum. Of the cancer of the breast, four were influenced favorably both objectively and subjectively, while a case of orbital sarcoma was rendered distinctly worse, and the treatment had to be stopped. From these cases it would seem that we have in actinium a much cheaper, but equally efficient agent, in the treatment of inoperable tumors.

Diagnosis, Prognosis, and Treatment of Tuberculous Peritonitis.

Rolleston, of London, in an article upon this subject in the *British Medical Journal* of September 2, 1911, gives Dupré and Ribierri's classification of tuberculosis peritonitis into acute and chronic forms. Acute includes: (a) miliary, part of a generalized tuberculosis with abdominal pains, vomiting and tympanites; (b) miliary tuberculosis of the peritoneum and pleural; (c) miliary tuberculosis around the cecum, resembling appendicitis. The chronic forms include: (a) ascitic; (b) caseous, ulcerating or suppurative; (c) fibrous; (d) localized.

Diagnosis is difficult in the early stages, for the disease may be latent and only discovered during operations for some other disease; or it may become evident from acute intestinal obstruction due to adhesions left behind by an attack; in young babies the pseudo-ascites of gastro-intestinal catarrh may imitate tuberculous peritonitis with effusion.

The onset may be insidious, but in about one-third of all the cases it is acute. If acute or subacute and most intense near the cecum, it may strongly suggest appendicitis; if generalized, it may resemble enteric fever, a remittent type lasting two or three weeks, and with intervals of a few months may occur; or the tuberculous condition may be confused with pneumococcic peritonitis.

Ascites in children, so generally due to tuberculous peritonitis, must be differentiated in a careful manner from hepatic cirrhosis. In both, malnutrition, splenomegaly, ascites and some elevation of temperature may occur. A tuberculin test is not always conclusive, for tuberculosis may complicate cirrhosis. Jaundice is less rare in cirrhosis, although it may occur in tuberculosis; peritonitis from compression or constriction of the bile ducts, by enlarged glands or adhesions. Distension of the subcutaneous abdominal veins is infrequent in tuberculous peritonitis, and if present it involves the epigastric and internal mammary, while in cirrhosis the dilated veins are mainly around the umbilicus. Examination per rectum may reveal tuberculous glands. Examination of the ascitic fluid may show a predominance of lymphocytes in peritonitis and of endothelial cells in cirrhosis.

In late hereditary syphilis the liver is enlarged, irregular and ascites is present. The Wassermann reaction is positive, and more so in ascitic fluid than in blood.

Obliteration of the hepatic veins is very rare and there are no means of arriving at a correct diagnosis. The superficial abdominal veins are usually enlarged, which is very infrequent in tuberculous peritonitis.

In simple chronic inflammation of the peritoneum the ascites is more marked and persistent, and there is often evidence of cardiac disease and there is no fever.

Malignant disease of the peritoneum may closely simulate tuberculous peritonitis. The tuberculin test and examination of the cells in the fluid are the only possible means of making a diagnosis.

Encysted tuberculous peritonitis may imitate various cysts and tumors, such as a cyst of the urachus, ovarian cysts, hydronephrosis, renal sarcoma and even enlargement of the spleen. The enlarged glands must be distinguished from fecal accumulation and the nodules of malignant disease.

The prognosis he considers from three points of view: (1) As to immediate recovery; (2) as to relapses of the disease; (3) as to complications. In children the prognosis is better than in adults, except in cases of generalized tuberculosis. The greater reparative power in early life is an adjuvant factor, and in adults there is often a more extensive tuberculosis in the abdomen, as in the fallopian tubes in women and cirrhosis in men. In ascitic and fibrous cases the outlook is good. In caseous and ulcerative cases it is bad. An abscess at the umbilicus is a grave complication and a fecal fistula is hardly ever recovered from.

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Usually the more acute the onset, the worse the prognosis.

The presence of active tuberculosis elsewhere makes the outlook grave. Extreme emaciation and cutaneous hemorrhages are grave indications. Pleurisy with effusion, if concomitant with tuberculosis peritonitis, indicates widespread tuberculosis and a rapid and fatal course. In mixed infections with continued temperature, night sweats, and definite leucocytosis, the outlook is bad. Relapses of tuberculous peritonitis are not so apt to recur as does tuberculous salpingitis.

The most important complication is generalized tuberculosis. The writer states that in 26 fatal cases in children there was generalized tuberculosis in 13. Except in children tuberculous meningitis is not a very frequent complication. In the fibrous form intestinal obstruction may result from strangulation of the bowel by bands.

The treatment he divides into (1) general hygienic, (2) medicinal, including diet, (3) treatment by vaccines, (4) X-rays, (5) surgical.

(1) *Hygienic Treatment.* — Open-air treatment is important, with absolute rest in bed. When the disease has been arrested, the patient's life should be regulated as in pulmonary tuberculosis.

(2) *Medicinal Treatment.*—Drugs do not play an important part. As iodine and its preparations appear to have a special action on tuberculosis processes, iodoform and syrup of the iodide of iron are often used. For flatulence and diarrhea it is better to give guaiacol, thiocol or stryacol than creosote. Salicylate of bismuth and salol may be tried, and opium by mouth for pains or for obstinate diarrhea.

Local application of mercurial ointment or one of iodine and iodoform may be worth a trial. The good results following these applications may be partly due to the rest obtained by the bandaging of the abdomen, as good results have been obtained by simply strapping the abdomen.

The diet should be largely protein, to which cream and fatty food should be cautiously added. Starch and vegetable food should be avoided. The salt-free diet recommended in order to diminish ascites by Alwens is of doubtful advantage.

(3) *Vaccine Treatment.*—Opinion on this form varies as much as it does on the question of operation. The value of vaccine treatment is put forward for discussion.

(4) *X-rays* do not appear to have real therapeutic value. Extension and generalization of the tuberculous process have followed the treatment, and as X-rays in excess induce leucopenia, the patient's resistance may be impaired.

(5) *Surgical Treatment.*—It may be stated, as generally agreed, that operations are contraindicated in generalized tuberculosis; that it is unnecessary in the fibrous and adhesive forms in the absence of intestinal obstructions, but it is necessary in cases of abscess formation and in intestinal obstructions.

The recent explanation of the good effect of operative interferences is that, peritoneal tuberculosis being a local infection, the opsonic index of the ascitic effusion is lower than that of the blood after removal of the ascites, the fresh effusion has a higher opsonic index, and therefore has a curative action on the local tuberculous process. If this is true, simple paracentesis should be as effective as laparotomy, except in cases where a local focus of tuberculosis may be removed. The ascitic cases do well, whether operated upon or not. Simple paracentesis is often necessary. Injections of various substances through a canula after removal of the part of the fluid have not been tried by the writer.

Schramm found 80 per cent. of cures among operated cases and 64 in non-operated. Pie observed 74 per cent. of recovery in operated and 5 per cent. only in non-operated. Sutherland observed 50 per cent. in operated and 81 per cent. in non-operated.

For Gonorrhea.

Dr. J. G. Hutchinson, of Louisville, Ky., recommends the following prescription of Dr. John V. Shoemaker for use in gonorrhea:

External Use.

℞ Sulphate of copper, 12 grains.
Sulphate of zinc, 24 grains.
Acetate of lead, 24 grains.
Fluidextract logwood, 1 drachm.
Wine of opium, 2 drachms.
Rose water, enough to make 16 oz.

A syringeful of this is injected after each urination.

Internal Use.

℞ Oleoresin cubebs, 1 drachm.
Balsam copaiba, 1 drachm.
Pulv. white sugar, ½ ounce.
Pulv. acacia, ½ ounce.
Peppermint water, enough to make 4 ounces.

M. Directions—Teaspoonful three times daily.

—*The Therapeutic Record.*

Doctor, in sending in your subscriptions tell us what department of The Council you like best, what you would as lief see dropped and what new feature you would like to see added.

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THE

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The Treatment of Phthisis and Hemoptysis by Artificial Pneumothorax.

Dr. Claude Lillingston, in the *Lancet* of July 15, gives in detail the indications for this procedure and the method used by him for inducing collapse of the lung. Artificial pneumothorax for the treatment of phthisis was advocated by Forlanini in 1882, the nitrogen gas being introduced between the two layers of the pleura through a fine hollow needle. The apparatus and technique used by him have undergone numerous modifications since that time.

The writer describes two needles, each having special advantages. Sangman's, which is of the thickness of a darning needle and has the lumen carried out to the point. The stillette can therefore be used to probe the tissues at the needle's point. The other end of the needle is connected with india-rubber tubing by a side stem. The main stem through which the stillette passes is supplied with a trap, and its opening is made to fit the nozzle of a syringe. Kjer-Petersen's needle differs from Sangman's by having a solid point, the slit-like opening being situated at one side of the needle close to its point. It is less liable to be clogged by connective tissue, but the lung must inevitably be wounded before nitrogen can be injected and the stilette cannot be used as a probe.

The site commonly chosen for puncture is one of the axillary lines in the seventh or eighth intercostal space. A spot where the lung is healthiest is desirable, avoiding the neighborhood of cavities. A hypodermic injection of morphine is advisable half an hour before the operation and a local anesthetic such as eucaine may be used. The needle connected with the water manometer, but cut off from the nitrogen by a clamp, is vertically thrust to the depth at which the pleura is to be found. If the point of the needle is within the hollow of the unadherent pleura the manometer will show negative respiratory oscillations, a typical reading being 14 c. m. water on inspiration and 6 c. m. on expiration. When the oscillations show the mean pressure to be atmospheric the point of the needle is probably in the lung. If no characteristic oscillation occurs, the stilette of the needle should be used to clear it of blood or connective tissue. When characteristic manometric oscillations are obtained, filtered nitrogen or air is admitted, the quantity not exceeding from 200 to 300 c.c. at the first injection. After taking the readings of the manometer the needle is withdrawn. No dressings are required. The injections should be repeated daily or every other day until the lung is collapsed and a positive intrapleural pressure has been obtained. If adhesions are absent or easily broken down several injections of 500 c.c. each may be required before the intrapleural pressure becomes positive, but if there are extensive adhesions the pressure will rise rapidly, even after as small an injection as 50 c.c. The intra-

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pleural pressure that is necessary differs according to the extent of the lung's collapse. If it is complete a positive pressure of from 5 to 10 c.m. of water is sufficient and a greater pressure is liable to cause troublesome dyspnea. If the pneumothorax is strictly limited by adhesions, pressures of from 30 to 40 c. m. of water or more may be employed with impunity.

Dr. Lillingston considers that the selection of suitable cases for this treatment is difficult. The stipulation that one lung must be healthy would exclude nearly all advanced cases. If the prognosis is very bad, the worse of the two lungs should be compressed so that an estimation can be made of the degree of activity of the disease in the healthier lung and to see whether that lung is a cause of the fever or not. But even if that lung is gravely affected, he is in favor of continuing the treatment. Latterly a number of cases have been reported in which compression of the lung was followed by the recovery of tuberculosis lesions of the larynx.

In early cases and those of limited extent many will prefer conservative treatment, because it is yet too early to estimate the dangers to life from gas embolism and pleural reflex, and the chances that the compressed lung has for re-expanding when the injections cease. Forlanini has shown that pleural reflex can be averted by anesthetizing the pleura beforehand. He recommends an injection of stovaine in the neighborhood of the pleura before operation. He analyzed 1,454 thoracentesis performed in 1909 and found that the condition occurred only four times. Sangman, with an experience of 54 cases of artificial pneumothorax and 970 injections has only seen premonitory symptoms twice. In these cases the pleural reflex was due to the high intrapleural pressure required for the separation of extensive adhesions. Several deaths from air or nitrogen embolism have been reported in the early stage of the treatment. It is probable that faulty technique was to blame in a large percentage of these cases

In the majority of cases the compressed lung re-expands. A chronic fibrotic process is more likely to favor a permanent collapse than an acute process with little tendency to scar formations. Other conditions which favor permanent collapse are complete compression of the lung for a considerable time, an intrapleural pressure which is kept positive and pleurisy with effusion. In the uncompressed lung, apart from arrest of disease, there may be emphysema and elongation of the whole lung, due to increased intrathoracic pressure. Minor complications, such as serous effusion into the pneumothorax, tachycardia, surgical emphysema and dyspepsia are spoken of.

As regards the outcome of this treatment there is a great variation in the results obtained by different writers, but the total death roll is heavy. Brauer and Sangman insist on the inadvisability of relying on a purely statistical analysis of the results for a detailed knowledge of the gravity of each case is necessary for the full appreciation of the treatment's value. Treatment must be extended over a period of two or three years, for if it is concluded too soon the disease may flare up again as the lung re-expands and attempts to re-introduce nitrogen fail, owing to extensive pleural adhesions. Fortunately pneumothorax can be maintained by refilling the pleural cavity every month or two.

Organoscopy.

Dr. Bertram M. Bernheim, of Baltimore, has done good service in calling attention in the June number of the *Annals of Surgery* to the work done by Jacobæus, of Stockholm, in making practicable cystoscopy of the abdominal cavity.

The method employed is to use an ordinary proctoscope of one-half inch bore, the distal end of which is blunted by means of a metal collar, an electric headlight furnishing the illumination. An incision of sufficient size to accommodate the instrument is made in the epigastrium, and the tube, without the obturator, is inserted until

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its blunted end comes down on the organ to be examined. The normal fluid of the peritoneum permits the tube to glide gently from place to place, and allows the parts under visual examination, such as the lesser and greater curvatures of the stomach, the gall-bladder, and the underlying surface of the liver, to be carefully gone over. Should adhesions be encountered they can easily be avoided, as the involved area may be inspected on all sides. Before the incision is made through the abdominal wall, the patient is prepared in such a manner that a regular exploratory incision may be performed or any operation demanded may be undertaken. If a lesion is not discovered, it is also practicable to draw a part of the stomach out through the slightly enlarged wound, making an incision into its anterior wall and inserting the organoscope directly into its cavity. In withdrawing the organoscope, the wound in the stomach is closed in the usual way. The value of this method is seen in those cases where a doubtful diagnosis might be cleared up, as in the case of metastases to the liver from a carcinoma of the pancreas.

Should a more elaborate instrument be desired, a trap door is arranged by Jacobæus in a No. 17 Charrière catheter, in order that filtered air may first be pumped into the peritoneal cavity. This is done with the object of rendering the view of the abdominal organs more perfect, and it is, of course, necessary that the organoscope have a similar trap door, in order that the air pumped into the peritoneal cavity may not escape.

It is indeed marvelous to consider how the eye is rapidly being brought into contact with the parts of the body hidden up to the time of the introduction of the X-ray by Roentgen in 1895. It is impossible, however, for any one to take advantage of all the advances made in medicine, because if any patient was examined with all the care capable of being given to him, the amount of time necessary and the cost would preclude such an examination for other than scientific purposes, except among the very rich. This is well seen in the cost of taking care of a single patient in the Rockefeller Institute, where the matter of expense does not enter into the cure of the patient. The multiplication of suits for damages is dependent very largely upon the great increase in knowledge demanded of physicians at the present time, but it is a good principle at law that no more knowledge is demanded of a physician than that possessed by others practicing in the neighborhood in which he resides; but there is more skill demanded of the specialist, who places himself in the position of knowing more than ordinary practitioners of medicine. As the specialist demands more payment for his services, it would seem that the increased cost of being sick will ultimately have to be paid by the patient or the State, while affording opportunity for the physician to receive more money for his services if properly rendered. In other words, the time is coming when the knowledge now possessed by the specialist will be diffused to the general practitioner of medicine; or, rather, the specialist will himself become the general practitioner.

Mixture of Salicylate of Sodium With Iron.

H. Drinkwater,[1] of London, has used for the past fifteen years a mixture of salicylate of sodium and of the tincture of the chlorine of iron in rheumatic conditions associated with anemic, and especially in a kind of sore throat of rheumatic origin—where the pharynx is slightly redder than normal and there is pain. The mixture is prepared by taking 1 drachm of sodium salicylate dissolved in about 2 ounces of water, to which half a drachm of the iron solution in about half an ounce of water is added. This produces a dark purple mixture, with a thick curdy precipitate in proportion to the concentration of the mixture. To this is next added 1 drachm of potassium bicarbonate dissolved in 1 ounce of water, and the whole diluted up to 8 ounces with water. The precipitate dissolves on the addition of the potassium solution, and the result is a clear claret-colored mixture of an agreeable taste.

[1] *Liverpool Medico-chir. Journal*, July, 1911.

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Treatment of Infantile Paralysis by Rest in Bed and Immobilization.

MacKenzie, of Australia, published in 1909 his results in cases treated by enforced rest in bed with the application of splints to the paralyzed arms. Of ten cases that came to him in the first ten days of the illness, nine were practically cured. The splints were kept on from four to seven weeks in some cases and as long as eight months in others. MacKenzie thinks that this method of treatment will obviate the necessity for later mechanical and surgical measures.

Mayer,[1] of Cologne, believing this principle to be correct, has modified the method by extending the immobilization to the legs as well as to the arms, and by fixing the patient in a plaster-of-paris cast, or upon a plaster bed instead of using splints. He reports two cases thus successfully treated. The value of this treatment is seen in the alleviation of inflammation, hyperemia, leucocytosis, and in the formation of exudate, thus preventing sclerotic changes of the anterior motor ganglia, reflex irritation of the spinal cord, and serious contractures.

Venereal Prophylaxis: A Convenient and Efficient Method.

Dr. L. Mervin Maus, a colonel in the medical corps of the United States Army, in an article in the *Military Surgeon*, December, 1910, gives suggestions for a tenacious ointment which is equally efficient against gonorrhea, chancroid and syphilis. Taking his figures, we suggest the following detailed formula:

℞ Calomel, 25% (e. g. 3 2).
Carbolic acid, 3% (gr. 14½).
Lanolin, 40% (3 3; gr. 10).
Refined lard, 30% (3 2; gr. 22).

Mix and make into an ointment. Put into collapsible tube or tubes having a screw cap covering a tapering, blunt nozzle.

For more complete protection, where there is any abrasion of the skin or mucous membrane, this would better be applied both before and after coitus. The mode of application is to insert the nozzle into the meatus and express a suitable quantity into the urethra, and also anoint the glans, prepuce and entire penis.

Dr. Gustavus M. Blech, of Chicago, Ill., in an article in the *American Journal of Dermatology and Genito-Urinary Diseases*, August, 1911, reports several series of severe and crucial tests with this method, all entirely successful. To insure success the application should be made a few minutes instead of hours after coitus. Since the new albuminate silver salts, as protargol, argysol, etc., have recently been abundantly shown not to possess germicidal powers in the strength usually employed, their addition to such a preventive outfit only complicates the treatment, making it more difficult and hence less likely to be carried out at all. They only constitute an unnecessary, if not absolutely worthless, incumbrance to the treatment.

[1] *Deutsche medizinsche Wochenschrift*, June 15, 1911.

Experiment and Experience in the Practice of Medicine.

Beverley Robinson, of New York, in the *Critic and Guide* of September, 1911, says that during the many years of his observation and experience he has been constantly seeing in hospital wards new departures in practice, based upon late experiments in the laboratory and upon some new theory of disease and treatment, one new theory or treatment being soon replaced by another still newer one, which in turn was regarded as erroneous. He thinks that while enthusiasm should inspire every new generation, the conservative views of experienced men are valuable in pointing out lines which long observation has shown time and again to be true.

From his own up-to-date knowledge and experience he gives a few important points regarding treatment that might well be quoted in their entirety. He says that freshly powdered cubebs taken frequently and in moderate amount dry on the tongue has been of more service to him in acute throat disorders than any other drug. The local application of tincture of the chloride of iron, diluted with glycerin, is a most valuable astringent and disinfectant in tonsillitis and diphtheria. Creosote inhalations and moderate blood letting, especially with

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leeches, are extremely useful in the treatment of croupous pneumonia. Rhubarb and soda or magnesia, either as mist, rhei et sodæ or in Gregory's powder, are two most useful combinations in stomachal disorders with fermentation or hyperacidity. But no stomachal remedy is equal in general terms to the oxide and carbonate of bismuth. Castor oil is of infinite value in cases of intestinal disorder, accompanied or preceded by blue pill or mercury with chalk. No case of obstinate malaria is treated most wisely until Huxham's tincture of bark or Warburg's tincture has been faithfully tried. Trousseau's diuretic wine is the best combination for the old, when suffering with failing heart and kidneys. If this does not act, our final resort is to hypodermics of atropine and morphine in small or moderate amounts. In edema of the lungs, bronchitis, asthma, pleurisy, and pneumonia, when bleeding with leeches is eliminated, dry cupping is sovereign. Locally, to subdue pain where the skin is intact, lanolin, menthol, and methyl salicylate combined and covered with absorbent cotton and a gauze bandage are invaluable.

The O'Dwyer Forcible Respiration Apparatus for Children.

In this article, published in the *Medical Record,* September 16, 1911, Dr. Joseph O'Dwyer, of New York, gives his modification of the O'Dwyer-Fell apparatus. The O'Dwyer part of this apparatus consists of a cone-shaped ridged end. This fits snugly into the larynx and has running through it a channel for the passage of air. This, in turn, is connected with a hollow metal tube, curved at right angles and fitted with two external openings, one for the inspired air, the other for the expired air. The Fell portion is a large bellows, with rubber tubing connecting it to the laryngeal portion. The bellows is placed on the floor and worked with the foot. The writer thinks that there are serious objections to this: in the first place, because the air is not warmed, and, in the second place, because it is most likely to blow dust right into the lungs.

The modification which he has devised consists of a long cylindrical bottle or large test tube, half full of water, and plugged with a rubber cork. Through this cork two glass tubes are passed. The first one enters the water, the second just penetrates the cork. To the second one rubber tubing is attached, which, in turn, is connected with a suction valve on a large rubber bulb. More rubber tubing connects the end valve on this bulb with the laryngeal instrument. The cylindrical bottle is placed in a bowl or large graduate containing water, kept at about 110° F. The principle is very simple. When the bulb is compressed, a partial vacuum is created in the bottle. The outside air rushing through the long tube and passing through the water is both warmed and filtered. After this it passes into the expanding bulb and is ready to be forced into the lungs. While the bulb is compressed the thumb is held over the outlet for the expired air. After a very short interval the thumb is removed and the air allowed to be expired. Since the air pressure acting upon the inner wall of the thorax is lower than the atmospheric pressure exerted upon the outer wall, every dilatation of the thorox is contracted by a force corresponding to the difference between the outer and inner pressure. The expiratory contraction of the chest wall is favored by the same circumstance, and respiration almost always stops at the end of expiration.

The amount of air is gauged by different sized bulbs. The foot bellows would be out of the question with children. Gray gives the average breath volume in children in the first month as 1,300 c.c. per minute; in the twelfth month, 3,000, and between the second and third years averages between 4,000 and 5,000 c.c. To a child a month old we would give 30 c.c., or about 1 oz., 44 times per minute. To a child up to one year of age a 2-oz. bulb, emptied 40 times per minute.

This apparatus, with slight modifications, can be used for giving anesthetics for operations on the nose and mouth. The bulb is removed and the rubber tubing is connected directly to the short glass tube that just penetrates the cork. The cylindrical bottle is then half filled with ether and placed in water at about 110° F. By this means the ether vapor is warmed and the pharynx is tamponed, so that the blood is prevented from entering the larynx during the operation.

The December number of the MEDICAL COUNCIL will contain an article by Dr. Henry W. Cattell, of Philadelphia, on the "Use of Arsenic in Syphilis."

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Observations on the Proper Use of Adhesive Plaster.

The uses and abuses of adhesive plaster and the most efficient method of application and removal are discussed by Skillern, of Philadelphia, in the September number of the *Pennsylvania Medical Journal*. He considers adhesive plaster a poor substitute for needle and thread. In wounds that are to heal by second intention it is useful after granulations have sprung up, to counteract undue gaping. It supports tissues by equalizing the circulation; it secures mobilization by opposing the action of muscles cutoneous or deep. In scalp wounds rest may be secured by applying adhesive strips to oppose the action of the occipitofrontalis muscle; in sinuses of the neck the action of the platysma, and in wounds of the face, the muscles of expression are opposed in the same manner. In many instances of fracture and dislocations, adhesive plaster may be used in the place of splints to immobilize the parts.

The writer has corrected mild cases of equinovarus by applying the end of a broad strip just in front of the internal malleolus and retracting the path of the peroneus longus around the lateral border of the foot and up the outer side of the leg.

In applying adhesive plaster the part should be shaved to prevent pain in its removal, due to the rich nerve supply of the hair follicles, and also to obviate the wounding of hair follicles which invite bacteria and may result in furuncles. But if the part has not been shaved, painful removal of the plaster is obviated in two ways: One method is to follow the line of separation of the plaster from the skin with the pulp of the finger, and so support the root of the hair; the other is to loosen the plaster by applying some liquid that will disintegrate it. The writer prefers refined medicinal benzine, which is cheap, antiseptic and cleansing, and rapidly volatile.

He advocates thorough sterilization of the hair follicles and sebaceous glands before applying the plaster, as through these structures bacteria commonly infect the skin. By this means the small pustules which are so often seen on the removal of plaster are prevented. For purposes of cleanliness he cuts his strips from the roll at the time of using and thinks that a few broad strips give better retention than many narrow ones, except in the case of rubber adhesive plaster applied to retain bandages, when he uses strips about three-sixteenths of an inch in width. These he applies by following the turns of the bandage, upon the extremities of the figure 8, on cylindrical parts an imitation of the staves and hoops of a barrel, when the turns are at cross angles, as in the spica of the groin or shoulder or in head bandages he obtains retention by inserting pins so as to include the layers.

The Treatment of Diabetes Acidosis by Infusions of Sugar.

If a solution containing sugar be introduced into the rectum without producing a movement of the bowel, at least 50 per cent. of the sugar is absorbed into the system, but the quantity of glucose voided by the urine is not increased thereby. An explanation for this interesting fact is sought in the fact that when the sugar is taken by the mouth it must enter the portal circulation, while from the rectum it obtains direct entrance into the general circulation. Bálint,[1] of Budapest, introduces the solution by the drop method of Murphy, so that in the course of 24 hours as much as an ounce and a half of dextrose may be utilized by the system. He found, however, that to secure the best results this must be done while the patient was on a light diet of not more than 800 calories from bouillon and cheese.

Standard Surgical Dressings.

Mr. Frederick B. Kilmer, of New Brunswick, N. J., believes that the rapidly changing conditions of surgical methods would not seem to warrant the insertion in the United States Pharmacopoeia or in the National Formulary a formula for the preparation of antiseptic surgical dressing. Any standard adopted for medication for surgical dressings would be liable to become valueless long before the next revision. As the principal requirements for surgical dressings made of cotton or gauze at the present time are purity and sterility, such dressings should be known as aseptic dressing; as neither the practicing physician, the hospital, nor the ordinary pharmacist have adequate means for the preparation of dressing to meet modern requirements, this class of material under present economic conditions should be relegated to those possessing the required facilities.—*Amer. Jr. of Pharmacy*, September, 1911.

[1] *Berliner klinische Wochenshrift*, August 21, 1911.

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Original Articles

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Sentences, like sunbeams, burn deepest when most condensed.

Ergot as a Therapeutic Agent.

By DANIEL M. HOYT, M.D.,
PHILADELPHIA.

How often out of purely empirical observation are obtained facts of great therapeutic value.

We are living in the age of laboratory investigation. In the days when the intelligent members of the medical profession are requiring more than mere authority to prove the value of a remedy, yet we must not lose sight or underestimate the influence of clinical observation as a means of advancing our knowledge. In fact, it is only by a combination of the laboratory expert and the bedside practitioner, that ultimately brings us to the truth. For if we attempt to draw deductions directly from experiments on animals alone, we shall often find ourselves in error. Instance the action of morphine on the lower animals, the failure of the antipyretics to reduce temperature save in certain pathological conditions; the poverty of our experimental knowledge in regard to the purgative action of calomel. On the other hand, how dangerous is the purely empirical study of a remedy. Instance the long list of drugs that have been poured into patients suffering from pulmonary tuberculosis with a resultant of much greater harm than good. But, again, many of our most valuable drugs have come through purely bedside observation. Quinine in malaria, mercury in syphilis, thyroid gland in myxedema. The most superficial observer must recognize, therefore, the truth of the above statement. What we most require is a harmonious working of the clinician with the laboratory. There could be no better illustration of the above than the late development of our knowledge of the pharmacological action of ergot.

Years ago cod-liver oil, on account of the method of its manufacture, contained many impurities. The cod livers were allowed to putrefy before the oil was extracted, and naturally the resulting substances contained many of the products of decomposition. Now it is a common statement among older practitioners that this putrefied cod-liver oil had a much more powerful tonic and stimulating action than the present sterilely prepared product. It is a matter of striking interest that the relegating of cod-liver oil from a powerful tonic to the realm in therapeutics of a simple fat food has gone hand in hand with the development of processes for refining it. Very lately the laboratory has shown, through the work of Dale,[1] Dixon and Barger,[2] Walpole,[3] Abelons, Taylor, Gutier, and Emerson, that putrefied cod-liver oil, decaying placental tissue, meat and well-made active ergot, contain some very active pressor substances (amines), which are soluble in water, and that these substances do not exist in the absence of putrefaction. Here, then, is a definite confirmation by the laboratory of the clinically observed fact that cod-liver oil, when allowed to putrefy, is probably more of a stimulant to the circulation than when it is pure. Now, it is not the purpose of this short paper to go into the complicated chemistry of ergot, but simply to point out, so far as may be, the practical bearing recent discoveries have in the rational use of this substance as a therapeutic agent. It is well known that ergot is a decomposition product resulting from the action of a fungus growing upon rye, but the important practical fact, which is not so generally recognized, is that the fluid extract of ergot is an exceedingly unstable product. Now how many of us, who are in general practice, think how old our ergot is, or from whence we obtain it, or what knowledge do we have that the product we are using is active at all. Often, I think, very little. Now ergot is used routinely as a preventive against postpartum hemorrhage, but the uterus will contract without ergot normally, and it is here that an important danger lies. For if we happen to be dealing with a case that really requires the action of ergot, and we are using an absolutely inactive preparation, then as physicians we certainly are at fault. But how can we know that an active preparation of ergot is being administered? The answer to this question presents many serious difficulties.[6] There are at present many refined extracts on the market, but it is difficult to be cer-

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tain which are active. For use by the mouth I think still the most practical preparation is the old fluid extract. It is best to obtain it in small amounts direct from some reliable manufacturer. Several of the larger firms at present have a pharmacological laboratory where these extracts are physiologically tested. This is not absolutely reliable, but it is much better than no test at all. The question may be asked: Why is it not better to have the retail druggists make up a fresh fluid extract for the physician? This is a splendid method provided you are in association with a reliable, skilled and conscientious pharmacist, whose whole thought is not simply on the financial end of his business, and you are sure that this pharmacist is making his fluid extracts from an active ergot. This then is the first practical point of importance. The fl. ex. of ergot should not be over two weeks old when used, and should be prepared from some reliable source. Further, the idea that ergot is limited in its action mainly to producing tonic contractions of the pregnant uterus is pretty generally believed. A glance, however, at the later literature on the subject would soon widen this view. Ergot is a powerful vasomotor stimulant, acting very much as does adrenaline, namely, stimulating the sympathetic vasomotor nerve-endings. It probably, therefore, does not affect the blood vessels of the lungs, heart and brain. Now this stimulant action is certainly in part due to the amine substances mentioned above, the most active of which is now marketed under the trade name of tyramine. I have already mentioned that the stimulant action of ergot on the circulation resembles closely adranaline, but with this difference, while adranaline is extremely fugacious, and almost immediately destroyed in the body, the stimulating substances in ergot act much longer, are probably active in sufficient dose when given by the mouth, and are therefore distinctly rationally indicated in conditions of failing circulation, but on the other hand dose for dose these amine substances are much less powerful than adrenaline, and to produce an effect upon the circulation, therefore, much larger doses of the former are required. This brings us to the practical point that ergot is becoming more and more useful in conditions of low blood pressure, due to central depression, as in circulatory failure from acute infectious fevers, in delirium tremens, surgical shock, etc., because here the cause of the falling blood pressure is central, and so while it may be impossible to stimulate the depressed centers we still may be able to produce benefits by action on the periphery. In this connection I have made about twenty injections of tyramine in doses up to twenty mg., but the results so far have been very disappointing. I have taken the blood pressure at about five-minute intervals for an hour following the injection, and never have I seen a rise in blood pressure above ten mm. The details of these experiments will be published in another paper, but the reason that I have failed to get an effect in the human being is because the dose has been much too small. In an interesting paper published by Clark[4] in the *Bio-Chemical Journal*, he has shown that it requires from forty to fifty mg. to produce any marked effect on the circulation when giving the substance hypodermically, and one ought to use sixty to a hundred mg. to get any definite effect by the mouth. I mention this particularly as the substance has been put upon the market in hypodermic tablets, each containing five mg., which dose will have practically no effect.

Ergot is a very old remedy in the treatment of chronic types of relaxing diarrhea. The drug, I think, from its action upon the circulation, deserves a renewed trial here. I have several times used it with apparently very excellent results. One of the most interesting phases of the physiological action of the active pressor substances in ergot, is the resemblance to adrenaline again in the difference between their action on the pregnant and the non-pregnant uterus. This has been largely shown by Dale,[5] Dixon and Cushny, remembering that these substances act mainly upon the sympathetic nervous system, we can better understand the peculiar action about to be described. If a strip of muscle from the uterus of a pregnant cat be placed in oxyginated Ringer's fluid, and the strip of muscle attached to a writing lever, the muscle will show a certain definite rhythmic action. If tyramine be added to the solution, these rhythmical actions will be continually increased. Now if we repeat the experiment simply substituting a non-pregnent uterus, we shall find the contractions decrease. This observation has a most important clinical bearing. Ergot is commonly used in uterine hemorrhage from

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many different causes, but in functional types of dysmenorrhea it is generally thought to be contraindicated, but from the above experiment it should have a fair trial in this direction and I know that ergot for sometime back has been used empirically for this purpose. Thus has been outlined some of the practical uses of ergot gleaned from our experimental knowledge of the subject. First, the importance of having a fresh and active preparation; second, the value of the drug as a powerful vasomotor stimulant; third, its possible value as a uterine sedative.

3604 Chestnut street.

(1) "The Action of the Pressor Amines Produced by Putrefaction." *Journ. Physol.*, Vol. XXXIX, No. 1, July 23, 1909.

(2) GEORGE BARGER: "Isolation and Synthesis of Hydroxyphenylethylamine. An Active Principle of Ergot Soluble in Water." *Transactions of the Chemical Society*, 1909, Vol. 95.

(3) *Trans. Phy. Soc.*, 1909, 95, 1123. *J. Physiol.*, 1909, 38, 343. *C. R. Soc. de Biol.*, 1, pp. 463, 530, 1906. *Berts, Chem. Physiol. Path.*, 1902, 1, 501. *Lancet*, 11, p. 1158, 1907. *Bull. Soc. Chem.*, 1906, III, 35, 1195.

(4) "The Clinical Application of Ergotamine Tyramine." Alfred Clark, B.A., M.B. *Bio-Chemical Journal*, Vol. V, No. 5.

(5) DALE, *Jr. Phys. Soc.*, XXXIV, p. 181, 1906. *Cushing Jr. Phys. Soc.*, XXXV, p. 1, 1906.

(6) The Physiological Standardization of Light. CHARLES WALLS EDMUNDS and WORTH HALE, *Hygienic Laboratory Bulletin*, No. 76, July, 1911.

The Riddle of Rheumatism.

By WILLIAM BRADY, M.D.,
ELMIRA, NEW YORK.

NEITHER rhyme nor reason can account for the multitude of maladies that have masqueraded under the comprehensive title of "rheumatism." Our great-grandfathers attributed such conditions as bronchitis, pneumonia, and even ordinary coryza, to "the rheum"; indeed, the Greek root from which the word is derived signifies catarrh, *a flow*, which in no way suggests joint disease. The present use of the word rheumatism to describe certain manifestations of disease in or about the joints came down to us from the prerevolutionary period, when every febrile state—not excluding rheumatic fever or inflammatory rheumatism, as we call it now—was believed to depend upon "taking cold." Throat troubles and bronchial symptoms were and are so commonly noted as precursers of the joint inflammation that the entire course of the illness was and is, by superficial observers, charged up to "exposure" to cold, wind, draughts or dampness.

But science, strongly backed by common sense, ruthlessly shattered the convenient and misleading notion of "rheumatic weather" long ago. First, the discovery of the specific nature of one after another of the so-called rheumatic joint disturbances, such as tubercular, septic, gouty, metabolic, and gonorrheal joint disease, narrowed the field of possible "rheumatism" down to a comparatively limited extent. To-day we think of but two entities—or rather non-entities—when we hear the term rheumatism used; namely, acute inflammatory and chronic rheumatism.

Rheumatic fever, or as it is more commonly known, acute inflammatory rheumatism, is now strongly suspected of being a specific, or at least a bacterial infection. The preponderance of opinion seems to favor the theory that it is a joint infection of protean etiology, since various bacteria appear capable of causing the symptoms which characterize the classical fever. Certain strains of streptococci have been definitely associated with classical attacks of inflammatory rheumatism; and the use of streptococcus vaccine has given brilliant results in numberless cases. The pneumococcus, too, is now recognized as ubiquitous both in its general distribution and in its clinical manifestations. Undoubted pneumococcal tonsillitis has been demonstrated by competent observers in this country and abroad; there is good reason to believe this specific tonsillitis may be much more common than is generally supposed. Streptococcic tonsillar infections are well known to every practitioner; and the sequence of arthritic manifestations after tonsillitis of whatever type is a clinical occurrence of established propinquity.

The positive demonstration of pneumococcus multiple arthritis following directly on a tonsillitis is of sufficient interest to bear reporting. The case was so exceptionally instructive in many ways that it seems appropriate to describe it in detail. The report of the case will be made below.

What we have in mind when we speak of "chronic rheumatism" is a vague picture of a stiff, painful or damaged joint, with little or no tangible conception of the cause thereof excepting the threadbare fancy of "exposure" and malnutrition. In reality, we cannot deny that, provided the various recognized specific arthritides be eliminated from the picture, the diagnosis of "chronic

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rheumatism" is finally resorted to as a graceful means of confessing our ignorance of the true nature of the disease. One inclined to the frequent diagnosis of "chronic rheumatism" would profit by a careful and open-minded reading of Osler's description of the condition and a critical comparison of the view there given with those of other authors. The net result of the review will probably be a very confused idea, and a deep-rooted feeling that one would find it extremely difficult to give the pathology of "rheumatism" with sufficient clarity to differentiate it from certain other joint disturbances. This healthy skepticism will be advantageous in practice because it will force the practitioner to be a better detective; as in tracing crime the detective's primary purpose is to "find the woman," so in "chronic rheumatism" the clinician who traces the atrium of infection or toxemia may be truly said to possess the key to successful therapy. And this is not always so difficult to do.

A case of chronic joint disease of indefinite etiology, showing manifest interstitial gingivitis or chronically diseased tonsils or a chronic septic focus or suppuration anywhere in the body, will obviously derive small benefit from treatment which does not cope with the depot of toxins. A patient whose diet is such as to produce a notable quantity of indican in the urine requires something more than so-called "uric acid eliminators" and "anti-rheumatic" medication. In fact, the success of various irregular "specialists" is the treatment of chronic arthritis of non-specific origin lies largely in the dietic and gymnastic maouvers whereby they attain a balance of metabolism akin to the normal. We devote our efforts constantly to the application of such valuable measures as hot air, various baths, electric light treatment, and the like, all of which, while useful, are really but feeble attempts to smoke out an intruder better *kept out* by a diet selected with a view of preventing autotoxemia.

Such a diet must be as simple and elemental as possible, particularly in the first few weeks of treatment. A good gauge of the suitability of a given article of food for a given case is, in the author's opinion, the indicanuria test. The ordinary patient will not seriously object to living on a very limited diet for the first few days if the importance of so doing is explained. For example, rice and bread and butter; or weak tea and macaroni baked with cheese; or buttermilk and crackers. Under this regimen the quantity of indican will always diminish, if it does not entirely disappear; then a diurnal urinalysis may be carried out to determine the effect of each addition made to the diet from time to time and to retain or exclude from the diet such foodstuffs as may be indicated by the urinalysis. Meat is theoretically productive of metabolic embarrassment and practically we find it the common cause of indicanuria. Not always, though, and not invariably in the individual patient; indeed, there are but few patients who must exclude meat permanently from their diet. Most patients, however, consume an injurious quantity of animal proteid, as evident in the presence of indicanuria.

It may be said, with reasonable certainty, that indicanuria is the result of intestinal putrefaction of proteids chiefly of animal origin due to the colon bacillus and its congeners in the intestinal flora. Besides the arthritic manifestations of autotoxemia dependent on the by-products of this perverted metabolism, there is every reason to believe that much of the gall-stone, appendiceal and renal disease we meet in practice has its inception in this colon bacillus activity. Meat broths are notoriously good culture media for the colon bacillus; the extractives obtained by squeezing out the raw juice of meat are particularly favorable to the growth of these bacteria. Meat in moderate lumps, as swallowed naturally by carnivorous animals, is not only unobjectionable but positively advisable for patients with poor digestion. Scraped beef is far preferable to any broth or juice, domestic or proprietary, in feeding the sick, whether the illness be rheumatic or typhoid fever. This suggestion may seem radical to the advocate of strictly so-called "liquid diet," but its application through several years of private and hospital practice has convinced the writer of its value. Who could continue to think of milk as "liquid" food, having seen the tough, leathery curds like pork rind in the vomitus or the stool of a patient on a rigid milk diet? And who could consider milk the only safe food for the typhoid victim, having found such a curd projecting through the perforated bowel at autopsy? Milk deserves its place as the ideal food, containing most of the elements to sustain life, but it should by no means be called the only food for the typhoid patient. The generous use of eggs, crackers, toast, tea, coffee, scraped beef, and the like, to rein-

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force the milk, or, if necessary, to replace it, gives a milder course and a quicker convalescence.

Now to return to the etiology of inflammatory rheumatism or acute multiple arthritis. The case above referred to was as follows: A railroad fireman, aged 30, 67 inches tall and weighing 180 pounds, was admitted to my service at the Arnot-Ogden Hospital, January 31, 1911. He had suffered an attack of tonsillitis about three weeks prior to admission and the throat was still sore; the tonsils appeared large and dark red. His complaint was that a continuous pain in the epigastrium had been present since the first day of his illness; it was not increased by breathing and there was no cough. On entering the hospital he began to suffer his first arthritic pain in the shape of a lame ankle; soon after going to bed this became polyarthritic and a characteristic attack of multiple arthritis followed. Coincident with the arthritic involvement he complained of præcordial distress; there was a noticeable pulsation of the carotids and the præcordium. Pulse, 105; temperature, 101; respiring, 38. The night of February 2 he became delirious, the pulse rate was 130 and the respirations 45. Increased area of præcordial dullness and a to-and-fro friction heard at the base.

The delirium now became wilder and cyanosis began; the dyspnea was marked and a diaphragmatic immobility was very noticeable. Dullness and bronchial breathing were distinctly heard the morning of the fourth day; pulse, 140; temperature, 103; and respirations, 50. Venesection was done, twelve ounces of blood removed, and an equal quantity of saline solution run into the vein. The cardiac impulse became obliterated and the sounds could be heard but faintly. Paracentesis of the pericardium half an inch to the left of the nipple line in the fifth interstice, where dullness was outlined definitely, failed to withdraw any fluid; on moving the needle about it penetrated the apical wall, but not the cavity of the heart; it was then withdrawn. A blood culture made at the time of the venesection was reported a pure culture of diplococcus with every peculiarity of the pneumococcus. On the sixth day the pulse was 120, respiration 35, and temperature 101. The double pneumonia, the multiple arthritis, and the pericarditis all combined to make the case look desperate indeed.

A second venesection was done the afternoon of the sixth day, ten ounces of blood withdrawn and, owing to the weakness of the pulse, about twenty ounces of saline solution injected in the vein. Three hours later the temperature dropped to 97, the pulse went up again to 130, and the respiration remained at 35; the patient appeared much better, the cyanosis and the urgent dyspnœa greatly diminished. From this point on the condition steadily improved. On the ninth day the notes say: "Patient rested comfortably, sleeping most of the time." On the eleventh day, however, the notes say: "Delirious the early part of the night; tried to get out of bed to go down cellar." The patient made a fairly uneventful progress from now onward and left the hospital April 4. Examination September 5, six months after his illness, shows a chronic pericarditis, which will in all probability disable the man from his work as a fireman permanently. He was advised to retire to a small country home, and he did so.

The conclusion which may be reasonably reached from the case is that the pneumococcus is not only ubiquitous in distribution, but also protean in its manifestations. How many cases of tonsillitis, followed shortly by arthritic involvement, are dependent on pneumococcus infection is, of course, an open question, but they are certainly more frequent than we commonly suppose. That the pneumococcus may cause arthritic inflammation as well as endo- or pericarditis is now a recognized fact; and that it is very commonly the factor in ordinary coryza of endemic or epidemic occurrence is notoriously true. The vulgar notion of "a cold in the head settling in the joints" may have ample foundation, in fact, since it is very probable that the nasal mucosa may be the atrium of entrance for the pneumococcus in many cases of polyarthritis. This possibility ought to add further weight, if such were needed, to the condemnation of the inane and mischievous use of the absurd phrase, "catching cold." True, it is catching, whatever the bacterial factor involved, but in view of the well-known antipathy between cold atmosphere and the pneumococcus the latter part of the phrase should be omitted.

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If our readers desire explanation of any obscure points in any article in THE COUNCIL, they should address the author direct, enclosing stamp for reply. What is obscure to you may be so to many others. The author may reply direct, or he may address all at once through a further article in THE COUNCIL.

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Continuous Baths.

By WILLIAM FRANCIS WAUGH, A.B., A.M., M.D.,
CHICAGO, ILL.

Professor of Therapeutics, Bennett Medical College (Medical Department, Loyola University).

Balliano* last April reported a group of cases in which he considers that life or limb was saved by immersion in a continuous bath of 4 per cent. chlorine water. These were cases of compound comminuted fractures, etc., with phlegmon or gangrene. The advantages are very great. No occasional dressing can accomplish as much in the way of preventing and destroying infection. The temperature may be regulated so as to relieve pain and sustain the vitality of parts threatened with death. The interference occasioned by handling and dressing is avoided. It is easy, cheap, and effective,

The febrile temperature may be regulated by whole baths or even by partial ones, as the blood cooled in one limb returns to moderate the general heat of the body. The advantages are not confined to military surgery by any means.

Some years ago a patient came to me with a terrific fecal abscess, for which the surgeon (Dr. Bayard Holmes) made six incisions down the gluteal, perineal, and posterior thigh regions, each incision being from 12 to 17 inches in length. The tissues were infiltrated with fecal products to an extent for which the term "frightful" is not an exaggeration. As the only way to disinfect the man he was put in a bath-tub, with warm water, containing a generous admixture of sodium sulphocarbolate. This was selected by reason of H. C. Wood, Sr.'s, observation, that the flesh of animals that had taken the sulphocarbolate of soda showed a remarkable immunity against decomposition. An efficient antiseptic was required, that would not by chemical action lessen the vitality of the tissues and increase the tendency to destruction. Contrary to everybody's expectation, the man recovered

The mechanical difficulties in the way of applying a continuous antiseptic bath to a part of the body, as to a shoulder, are great; but in really desperate cases there is no special harm in subjecting the entire body to the application of sulphocarbolate solutions, or even of chlorine water, perhaps. One must get out of the habit of associating the idea of antisepsis with such agents as sublimate and phenol, which carry dangers of their own.

In treating morphine habitués I have found that the period of discomfort may be rendered less irksome by putting the patient in a tub of warm water. The one thing such patients dread and complain of more than all else is the "indescribable nervousness" that comes on after the morphine has been stopped. The patient has neither pain nor ache, he sleeps sufficiently and eats full, regular meals; and the man who has not been under the domination of the drug is apt to say: What more can be asked? But patients assure me that the nervous discomfort is such that any pain, however acute, would be a relief.

The exact application of certain remedies when exactly indicated—gelseminine, pilocarpine, physostigmine, cicutine, solanine, picrotoxin, strychnine, hyoscine, quinine, xanthoxylin, musk, caffeine—goes very far to relieve this condition. Thorough and continued elimination does more; it goes very far in preventing it. Yet there seems to be in some cases an unresolved residuum of suffering that should be relieved. The cold bath is great, and it is the exception when one does not realize such pleasant sensations from the first one, that the attendant is importuned to repeat it every hour, or even more frequently. But to some the hot bath brings more relief. The patient spends in the tub most of the forty-eight hours within which the "ordeal" is concentrated, with an attendant near to see that the patient's head doesn't slip under the water during sleep. I think the relief is partly due to the relaxation of psychic and somatic tension, partly to the elimination induced by the bath. At any rate, it is one of the many devices by which those who are experienced in the treatment of drug habitués may alleviate the suffering of the withdrawal period and aid in the escape of the victim from his degrading bondage.

*_Giornale di Medicina Militari_, The Military Surgeon, July, 1911.

An Atypical Case of Appendicitis.

EDITOR MEDICAL COUNCIL:

Sometime since I was called, in the night, to see a girl, 13 years of age, suffering with "colic." She was well developed for that age, having menstruated a few times. During the last two years her health had been fairly good; previous to that time she was a very delicate child.

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She had been vomiting for an hour or so with colicky pains when I arrived. The pain was referred to the epigastrium, but as there was considerable tenderness at McBurneys' point, I suspected appendicitis and avoided opiates in my treatment. Next morning I found the three cardinal principles of appendicitis—pain, tenderness, and rigidity of the abdominal wall. The pain was now localized to the right iliac region, focussed at McBurney's point. I unhesitatingly diagnosed the case appendicitis and based my treatment on this line. The attack was very acute and very active, with little response to treatment.

The symptoms growing worse, I informed her father that if there should be no improvement in twelve hours I would advise an operation. Next morning there was no improvement, but all indications pointed to pyogenic action. The father absolutely refused to allow an operation, saying that he had known two cases to recover where an operation was advised.

In a short time fluctuation showed pus, and the gravity of the case was explained to the father. Following this there was some diffused peritonitis, which abated under treatment, the disease being again localized. In a few days she complained of pains at the lower margin of the liver and fluctuation could be obtained at this point. The temperature was now 103.2° F.; pulse over 100. In about twelve hours more she began expectorating large quantities of fetid, muco-purulent matter, very offensive, with a distinct fecal odor. This continued for twelve hours, when there was some abatement in quantity, with pulse from 120 to 180.

At this period her father asked me what I thought of her case. I said, "She will die." In great distress, he asked, "Can't you do anything to save her?" I said, "No, it is too late now." I was discharged and the case put in the hands of another physician. She died in about ten days. I very much regret that there was no post-mortem.

John B. Deaver, of Philadelphia, in the second edition of his admirable work on appendicitis, page 271, says: "At times a peri-appendicular abscess may burrow upward behind the liver, either through or behind the diaphragm, and may finally rupture into the lungs, the pus being expectorated." He then relates a case as illustrative, which is almost parallel with the one related above.

B. E. Dawson, M.D.

Kansas City, Mo.

"The Draft Delusion."

By M. B. TULLER, M.D.,
CRAWFORD, KENTUCKY.

As we discover new causes of disease, or think we have done so, we are prone to neglect those which previous observations have shown to be at least likely causes, if not absolutely the true causes. That there are certain bacteria which are inimical to human health I have no doubt, but that they are the sole cause of disease I am not prepared to believe, nor is it at all reasonable to my mind that there should be a specific germ for each congested tissue in the body.

As I have solved the problem, these micro-organisms have two methods of action, viz., first, conveying, secreting, and excreting within the body profound toxins, which intoxicate the blood stream and thence the tissues, and disease results. This is true, as I believe, of the bacillus typhosus, Klebs-Loeffler, amœba coli, and possibly some other organisms.

The second method of their action is local and mechanical by multiplicity and is of secondary importance. The first vital principle of the treatment of the sick is to establish elimination, and to prevent any interference with the functions after their re-establishment. If elimination is checked in any one organ, one or two conditions results, either, first, extra work is put upon the other organs which they can ill afford and they are weakened to that extent; or, second, if they refuse to carry the additional burden the general systemic intoxication is increased and the disease process is aggravated. Now, the skin is one of the organs of elimination, and the effect of a chilling draft on it is to contract both capillaries and ducts and glands, and stop its work, either burdening the other organs or increasing the toxemia and causing internal congestion.

A robust man works outdoors all winter in the rain, snow, and cold wind, disregarding them as though he were a mule. His bowels are irregular, or he makes them so, and he loads himself daily with heavy proteid and fat diet, expecting to consume it in his arduous labors. His skin, by reason of his exposure, has been in a contracted state all winter, or the ducts and glands have been—probably has never felt a sponge nor been in a bathtub. In the early spring he gets sick with influenza, bronchitis, or pneumonia. The laity say he is "full of cold" and they are literally correct,

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but in a different sense from their understanding. He is full of toxemia from exposure and imperfect elimination.

An associate of mine was once called to see a child who died in one and one-half hours after seizure. The doctor was nonplussed at such a sudden result, and gave me the following history, asking my opinion as to cause of death: The child was aged 2 years, had not been recently sick, was in its usual good health on a warm morning in September when it got up. It played around the yard for two hours or more and sat down in the back doorway. At the other end of the hall was another open door, through which a stiff cool breeze was blowing. Suddenly the child cried out and fell over gasping for breath. The mother ran to it, picked it up and sent hastily for the doctor, who arrived as soon as possible, but in thirty minutes it was dead. I told him it was a case of acute pulmonary congestion from sudden chilling of the surface by the wind. He did not believe that was possible. An autopsy was held the next morning by him and me, which showed a complete engorgement of the middle and upper lobes of the right lung. The child died of suffocation.

A lady, 40 years of age, had typhoid fever, from which she recovered, her temperature having been subnormal for a week, other conditions being normal. I called one morning and found her temperature 103.5° F., with humid respiration. I glanced across the room and saw a window wide open, through which was blowing a cool mountain wind late in September. I asked her if it struck and chilled her, she said that it did and she had complained of it, but the nurse said she needed fresh air. I had her protected from the draft and gave her some aconite to re-establish dermal elimination, and the next day the "recurrence of the infection" was gone.

Another lady, aged 24 years, had typhoid fever and her temperature had been normal for several days when I received a hurry call that the fever had returned and the patient was smothering. I found the temperature 102° F. and a congested right lung. She had ordered all the household to retire, as she no longer needed their attention during the night. The fire had gone out and the night turned unexpectedly cool, and she had chilled as fresh air was duly regarded with insufficient protection to her body. She received the same treatment as the former lady, and in twenty-four hours her temperature was subnormal, and there was free expectoration of rusty mucus.

I am convinced that many of our cases of "recurrence of the infection" in typhoid cases are similar to the above, but from preconceived ideas or inadventure of observation the real state of affairs is overlooked.

The body of the post-typhoid patient is not yet entirely free from its intoxication, and the nervous system is in a serious state of shock, and can ill resist chilling encroachments; and there is a reawakening, not of the infection, but of the intoxication from undue dermal suppression, and a grave state ensues.

I am, myself, at this time, suffering from a bronchial congestion from too much nocturnal exposure to the "draft delusion," and have had to lie up and nurse myself, otherwise the EDITOR would probably not have secured this paper.

Tuberculosis and Fresh Air.

TO EDITOR MEDICAL COUNCIL:

Dr. Lewis Weiss has an article in the October number replying to mine, which appeared in the July number, and his remarks are as wide of the mark as were the editor's criticisms in the July number, so far as they apply to this section of the country. Dr. Weiss has little conception of the life of these mountaineers—of their rough, open log houses, which mostly will admit of plenty of air regardless of the state of windows and doors. Many of them sleep with open doors during all but the most inclement nights, as a matter of habit, and the doors are scarcely ever closed during the daytime. The stables here, in which the farmer is supposed to work, are mere open-spaced shells, and the churches are mostly as open as his house, while the moving-picture shows never appear. While not decrying the legitimate use of fresh air in the treatment of disease, the point that I make in tuberculosis is, that its sole usefulness is that it decarbonizes the blood.

I had a patient suffering from the disease in the early second stage. His people asked me if I could do anything for him, and I frankly told them that I could do nothing in a curative way. They said they wanted to try a doctor who had come into the country some miles distant. I told them by all means to do so. I met the doctor and found him a very intelligent gentleman and very enthusiastic in his work. He spoke very hopefully of the case and I wished him joy. He applied at once all the modern fresh-air methods and such other means as his judgment dictated, and the patient did not get well nor materially improve. The doctor said to me afterwards that he would have died earlier if he had not instituted such measures. He will learn, if he stays here long enough and practices his profession, that when his patients have had fresh air all their lives and develop tuberculosis they are physically

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doomed, except in the very stage when he will not get them, and that is the immediate onset, and then his medicines will be the means of cure and not fresh air.

Dr. Weiss' cat episode was certainly very interesting, but if I were asked to diagnose its state while its caudal end was tied up in that rubber bag I should say it was suffering from ennui. No offense, Doctor.

Crawford, Ky. M. B. TULLER, M.D.

Scraps of Interest Sent in by Our Readers.

Dr. C. K. Williams, of Perry, Oklahoma, writes that colonitis, the green-fruit disease so frequently caused by unripe peaches, pears, plums, watermelons, and apples in the North, is due, in the tropics, to unripe sugar cane, mesples, guavas and mangoes, and special emphasis should be placed on the famous dish known as Chili con carne, à la Mexico. The doctor finds that the constipation following an attack may lead, especially in children, to rectal protrusion, which, in its obstinacy, sometimes calls for the aid of a physician to replace the same.

Almost complete absence of right fore-arm, with rudimentary thumb and fingers, the thumb having a nail. Patient of Dr. Ernest W. Cowern, North St. Paul, Minn.

Dr. C. R. Clark, of Auburn, Ind., says he is much interested in the articles which have appeared in the COUNCIL on venereal diseases, but he does not believe that notification will remedy the difficulty. He suggests a national marriage law, requiring a medical examination, which would throw out syphilis from the list of marriageables, as he thinks this would strike at the heart of the evil better than any other plan yet suggested. A strict examination for marriage license would keep the great majority of cases under medical supervision.

The Medical Missionary.

By FRANCIS T. B. FEST, M.D.,
LAS VEGAS, N. M.

A subject is introduced which so far is touched only occasionally except in publications dedicated only to missionary work. A demand is made for workers, educated in the art of healing, members of a profession which is overcrowded, and yet the response is inadequate.

The writer has been in close touch with medical missions and medical missionaries abroad and at home. He follows everything germane to this work with keen interest and tries to apply a measure and study the situation from a viewpoint different from the prevailing ideas and rules.

Ever since Christ gave his apostles the Sacred Message of *the one* religion, men have consecrated themselves to be bearers of that message. Formerly their path led oftentimes to death; this is rare to-day, but the path is thorny nevertheless and few are willing to travel it.

Many millions have not embraced the faith of Christ, and Christianity must struggle on. Christianity means love and charity; deeds of love and charity are essential to move the heathen mind. Active demonstration of these two weighs more than hours of preaching. Relief from suffering is love and charity. Christ's most appreciated acts, recorded in the *Book* and which moved the masses, were the healing of the sick. We cannot think of the Saviour without thinking of the lepers, blind, and crippled. Healing and faith were always associated. In mystic Egypt the priests were the physicians; in medieval times healing was in the hands of the monks. Even in the abnormal conditions of mind, the contagious affections of the public minds and masses, in their absurd manifestations we see attempts of healing by influence of faith; like Christian Science, Emmanuel Movement, Lourdes worship, etc.

Missionary organizations always recognized the influence of healing upon the primitive mind. In countries with special forms of civilization like China, India, and formerly Japan, the modern healing showed the superiority of the modern, the Christian, civilization. Since of old the missonary received a certain amount of medical training, not only to help himself, family, and associates, but also to be able to relieve the ignorant heathen, and much good has been

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done and is done yet because "in the land of the blind the one-eyed is king."

The demand upon the missionary became too great; the medical missionary became a need. He has done splendid work. Much of the present civilization of Japan is due to him. In China the medical missionary led to the formation of medical societies and important schools. Modern China has capable physicians and the medical missionary deserves the first credit. The medical missionary was the first representative of modern science.

The medical missionary must be a Christian by conviction, competent in his profession and physically able to undergo the strain of the work. Often a demand is made that the physician be a preaching missionary at the same time; this is a great mistake, except where pioneer work is done. We recognize the fact that the physician who wants to be an active unit in the dissemination of Christianity must be a thorough Christian himself and aiming to take his part. It is only logical that, by word and deed, he promote the cause which he serves. I prefer the German name, "Missions-Arzt," *mission physician,* to the misnomer, "medical missionary."

Most members of our noble profession are active members of some denomination. Very many are active workers. Yet there are fifty vacancies in the various fields and fifty more men needed. The situation, while not brilliant as far as finances go, is not worse than many positions which have over two applicants for every vacancy. The average income of a physician in this country is below $750. The income of a medical missionary, as a rule, is not less and often better. While this can be no inducement it is far better than drudgery.

There is a wrong condition somewhere. An overcrowded profession in a Christian country ought to be able to fill these vacancies. It is true that army and navy also are short, but the ardent young physician whom we meet every day ought to be willing to give his time to the Lord, while military glitter has no attraction for him at all.

One of the difficulties of both, military service and missions, can be found in the fact that both demand young men. In military service, with its complicated machinery and organization, this is self-evident, while in mission work only partly so. At the same time the military needs are filled without regard to age, when the needs so demand, while the mission societies never employ a man above a certain age and adhere strictly to this rule.

Only relatively few of the young remain in the field; many go in the fire of first love and many go because they consider the mission a stepping-stone to private practice in a foreign country and a good recommendation. Many find very soon that they made a very grave mistake.

Must the medical missionary of necessity be young? No. We cannot doubt that wherever the pioneer work is needed, where primitive work has to be done, the consecrated young man, who is more preacher than physician, will be the ideal person. This work is for the young man with a heart full of ardor, without the strings of a family or the love of a profession. He may not be the better physician; he will seldom last; his zeal will not make him the best director of a hospital; but the power of the first impulse is the entering wedge most needed. It is less a matter of the head than of the heart; less a matter of strength than of force.

Often the statement is made that the young acquire the language more rapidly. This is true. And it is true also that knowledge of the language is a *condito sine quâ non,* yet in the majority of cases only a colloquial knowledge is essential. The societies ought not to lay too much stress on a higher demand for the medical man along this line. The older man from the point of view of service will be superior. Let us refer to analogies from other walks of life. During the Spanish War Senn was sent to Cuba as chief of the operating staff. His career was brilliant, his work cannot be excelled; he would have continued giving good service, yet he was past fifty. A younger man could not have filled his place as well. Take Koch: he was advanced in years when he did signal service in Africa, discovering the means of conveying the trypanosomes in sleeping disease. He would have acquired the language also if necessary.

Kitasato is over fifty, yet he is sent to Manchuria to study the plague; he will make it a success. The ripe man, as a rule, will work harder. It may take him longer to acquire a new language, but his professional ability his mental training, will be of greatest value in the long run. Do we not meet nearly daily in this country immigrants of advanced years who learn English? Does not the same apply everywhere?

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What is true in the mercantile world ought to be true in the mission fields. The years of study, the languages learned in college, the whole training, will enable many an advanced physician to learn a language better than the untrained. Granting that a man of fifty will not master a language like a boy of twenty-five, will his services be less valuable because of an accent; will his endeavors to teach the message be less successful because the grammar may be faulty? America and Europe now exchange academic teachers. How many of the German professors in Boston will speak without German accent? How many American professors in Berlin will talk a pure idiom? Will the matter taught suffer at all? Will any mission work suffer for a like defect?

Hospitals are vacant now. Some have had no physician for several years. Would it not have been better for the cause to have a man there advanced in years, even if it would take him double the time to learn the language? The statement has been made that a young man will resist the climate better than an older man. Consumption kills 20 per cent. between the ages of twenty-five and forty-five. The hearty man of fifty has a chance of many years of useful service. I copy from one of the editorials from the *American Journal of Physiologic Therapeutics.*

Some Thoughts on Climate.—Our views as to climate have undergone changes corresponding to the progress in medicine. The tropics were considered as fit only for the dark-skinned races. We know now that the white man can successfully fight the diseases peculiar to tropical countries. Yellow fever has lost its terror; malaria can be avoided; vaccination gives protection against typhoid. The spirilloses yield to treatment and the plague will never again devastate Europe.

Many are the diseases yet unknown to us, and conditions favorable to and shielding man's enemies cannot be changed at once. Even if thousands of explorers and pioneers, thousands of missionaries and travelers, will yet fall victims, they are not victims of the climate, they are victims of temporary conditions which the white man, in the course of time, will overcome.

Climate exerts certain influences which can be utilized for therapeutic purposes. Certain climatic conditions are unfavorable for certain pathologic states, already existing or developing. The healthy individual, and "healthy" means to be free from organic lesions of all the *vital* organs, can exist in any climate provided he avoids functional disturbances within, which will reduce his resistance.

If we look into the real causes of the so-called "unfitness of the white for the tropics" we soon discover that Bacchus and Venus are mostly to blame. With the plasmodium-carrying and the yellow-fever-inoculating mosquito lurking about, the named deities sadly repay their worshipers by creating a *"resistencia diminuta."*

It is said that in the tropics the Caucasians do not propagate beyond the second generation. This is partly true; but many of the race-destroying miscarriages of white women in the tropics are of luetic and malaric origin and therefore not necessary. It is far more frequent that the treponema pallidum does its deadly work than the rays of the sun or the emanations from the jungle. The young white who undergoes a thorough course *in venere* has his seminal vesicles unfit for their proper role, and the bride, selected and wedded on a trip home, often after a short course of treatment, will be sterile, not so much by the plasmodium but by the gonococcus.

We, who have spent some time in the tropics, often use the climate to cover up what is only the sin of the youth brought home to the man.

Generations of white men have existed and exist in the tropics. In tropical America we find localities where the blood of the Spanish *pobladores* of Gothic descent has remained pure and the vigorous, fine, blood types are a surprise to the traveler.

Mission societies yet labor under such misbeliefs. We see the notice in the medical press that there are many vacancies. They demand *young* men for their fields. There may be many reasons, especially for the preacher, who must master the language most profoundly; but there is no such reason for the medical man who is qualified to learn the language, perhaps has mastered it already and has reached the middle life. Middle aged men, even those past middle age, have done good service for many years in other capacity in the tropics, why should the physician not do the same?

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The fear of high altitudes is disappearing on this continent. The sight of a venerable matron and her open flask, when nearing the high passes, is becoming quite scarce. The number of the poor lungers who go to the Rockies or desert with the medical advice to "rough it out," are less every year. While the value of high altitudes in the treatment of tuberculosis remains a well known factor and while the scientific reasons and foundation of such treatment are more recognized and understood, it is a blessing for the citizens of the Southwest that the belief, that mountains can perform miracles, is waning more and more, and it is a blessing that the indigent tubercular is allowed to die in peace at home.

FEST.

The young man may become disappointed when the older man will stay. A man of ripe age will not give up home and friends unless he feels that he leaves for good. The older man will know what moves him; he will know himself. Ambitions dull down with time. Time teaches that there is more than a just *living.* The older man has broadened in his contact with vice, sin and all the weaknesses of human nature. The influence of heathenism will not overawe him. The fire of youth may have gone, but when the ripe man consecrates himself to a cause his aim is clear and free from illusions of youth, he will take life as it is

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because he learned life by living. Perhaps in an elderly man the religious spirit his developed and now life seems empty. Perhaps he will study Arabic, Syriac, Persian, or any other language with more zeal than a young man. Is it not worth trying? There are stations self-supporting; an experiment would not mean financial loss. In such a case the medical missionary is not expected to be able to present parenetic homilies with the oratorical mastership of Chrysostom or didascalic catechists like Cyril. The elaborate perorations in the native tongue will be left to the preaching missionary proper.

Augustine started life in sin; his *Confessiones* and *Retractiones* fit modern times like Rousseau's Confessions. He was no orator like Origines and others, yet his career started in middle life.

There may be men of middle life, hale and hearty, with vigor of mind, and the purpose of Christianity may become their aim. Should they not have a right to be tried?

It is difficult to buck against established rules, especially those of the old religious organizations when the pennies look large and hundreds of thousands of dollars are to be disbursed by conservative trustees after being taken in as pennies. In spite of this we urgently request that our suggestions at least be considered once from this viewpoint.

On the other hand, we call the attention of the young men to the chance they have to serve in a good cause—in the best of all. If a young man feels the voice calling him, why not heed it? Why always look upon the commercial side of life? Success in medical practice is an unknown quantity. The young man finds disappointments and often failure. The grasp for wealth, the modern drift of commercialism, will destroy his ideals. The routine of private practice grinds down many a bright mind into indifference and mediocrity. The active mind when restricted will suffer with the recognition that the knowledge piled up in school, looking so big when the shingle was hung out, is nothing but the first step to more knowledge with no means to satisfy the thirsty mind. How bitter are the hours when we first realize how little we know and how much we ought to know. How bitter also when we see that financial success or standing does not always depend upon real merit or knowledge and when we see how men unworthy of title or honors pass us. How bitter for the modest but true physician to be elbowed out of the charlatan's road and kept down to drudgery.

The young medical missionary will be spared many of these tribulations. He has a fixed income; he will be cared for. While he may never be a financial success—which he may miss even at home—he will be in relatively easy straits, more so than many in practice at home. He cannot be disappointed entirely because he knows he served not for money but for the sake of the work. He can look back with pride to a life which by its nature cannot but have helped to make mankind better. He has achieved more real glory, more true merit, than in grinding away his life in a village at home under limited financial circumstances.

While we hold out to the young man the advantages of being a medical missionary. we warn him not to make a mistake. He must go to stay. The work is of a nature that the hand must not be withdrawn; the plow needs the guiding hand. To do this, to be a helper in carrying the message of Christ, one must feel the strength of conviction in order to remain loyal even under difficulties. If the man is not a Christian at heart he will become a burden to himself and a burden to the work.

To sum up:

(1) The pioneer work must be left to the young.

(2) The young medical missionary does not average a longer term of service than the older.

(3) The older man has more experience and knowledge of life and likely goes to finish his life in the service.

(4) The older man's consecration is not the fickle fire of youth; he knows the negative phase of life; he will be more contented and more thorough.

Intravenous Medication.[1]

By JOSEPH F. SOMES, M.D.,
VINCENNES, INDIANA.

I have been making an extensive series of intravenous injections during the past year, a form of treatment which, in my hands, has produced some very good results. It is in regard to these and the philosophy of this particular method of treatment that I propose to speak to-day.

So far as the administration of drugs by the direct route is concerned, that is, by direct injection into the blood stream, it

[1]A paper read before Pennsylvania Railroad Physicians' and Surgeons' Association, at Indianapolis, October 4, 1911.

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would seem that not only is it a most satisfactory method, but that it is also a most sensible procedure. Many of the disadvantages found to be due to the irritating qualities of certain remedies upon the gastro-intestinal canal or their modification by the stomach and duodenal juices, seem to be convincing proof of the value of the direct route, always presupposing that it is possible to procure a remedy which is not irritating when administered intravenously and one which is miscible with the blood without any possibility of danger.

Nearly two years ago my attention was first called to this method of treatment by meeting a Chicago physician, who administered an intravenous injection of Bannerman's solution to a patient in Vincennes who was dying of pulmonary tuberculosis. The results of the treatment of this case were not permanent by any means, for the patient eventually died, but the notable increase in her resistance and the evident benefit to the girl were so manifest that, in the meantime, I had begun to treat another patient with results which were both permanent and very satisfactory. Since then, I have given nearly six hundred intravenous injections in over two hundred cases, and altogether the results have been well worthy of mention here.

Before going into details regarding the cases, I would like to speak for a moment regarding the philosophy of this method of treatment. The solution that I have used is the formula of William Bannerman, of Chicago, which goes under the name of Bannerman's intravenous solution. The formula is not secret, each ten cubic centimeters (an average dose) containing: acid salicylic, 2 grs.; mercury albuminate, 1/9 grs.; iron, 4¼ grs.; sodium chloride, 6 1/5 grs.; calcium carbonate, 2 grs.; and Phenols, 1/25 grs.

Your attention is especially called to the fact that each dose of this formula contains a large amount of soluble iron, and I have good reasons to believe that this is an important factor in carrying out the work which this solution certainly does. You all have found out how difficult it is to introduce iron into the system in a form which can be readily assimilated and yet not pass out in the feces, as is the case with the majority of the varied forms of inorganic iron. Here, however, we manage to use over four grains to an average dose. Then, too, the other ingredients of this solution——the mercury, the small doses of phenols (creosote, carbolic acid and guaiacol), and the moderately small dose of salicylic acid, are all directed at the hemopoietic organs.

As the result of using this injection, I have found quite a noticeable increase in the number of red cells and in the quality of the blood as manifested by the hemoglobin test. Incidentally, I might say it has not always been possible for me to make careful blood counts, but I invariably have had recourse to the hemoglobin test, which is altogether simple and a really valuable help.

What this may have to do with railroad surgery will be very evident when you realize that practically all the cases which we have to treat, that is, those which do not respond immediately to the ordinary treatments, and get out of our hands in a few days, suffer from a lowering of their resistance. If it is possible to benefit the quality of their blood and increase its healing powers, surely all our efforts in the care of other conditions which may be found coincident with the lowered resistance, will be equally benefited.

Circumstances in my offices are not favorable to making careful scientific examinations. I am not running a hospital, have no medical assistant, but, as I have said before, it is not difficult to make a hemoglobin estimation, nor is it difficult to see whether a patient is gaining or not—usually they can see it themselves more quickly than we can. At all events, I have found that this method of treatment—the intravenous injection of Bannerman's solution—certainly has a very marked influence upon the resistance of the patient. The weight is usually increased—a very important desideratum in treating almost any condition.

It might be well to call your attention to a remarkable case recently reported by Henry R. Harrower, M.D., of Chicago, in the *International Journal of Surgery*, for August, 1911. The doctor here reports rather extensively a case of puerperal sepsis, which he treated by this method, and, from his statements, one cannot but believe that there we have a means with immense possibilities behind it.

So far as the administration of remedies by the direct route is concerned, I have found practically no difficulty at all. Many physicians who were stimulated to write to me by reading an article from my pen published in *American Medicine*, December, 1910, have intimated that they were afraid to go directly into a vein. They dreamed

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of coagulating the blood in the vessels, of destroying the veins, of heart-block, and all sorts of imaginary troubles, which they laughed at when they had become accustomed to giving the treatment. The whole proposition lies in getting a Luer glass syringe and a decent small needle—I almost always use a 27 gauge, ¾-inch needle, and stick it into the vein directly. This is very easily done, and I might, perhaps, spend a moment in giving you my technique, which is as follows:

Examine the flexor side of the elbow and decide which arm is most suited to the treatment. I have noticed that many arms vary in regard to the anatomy of the superficial veins—the median basilic or median cephalic. I select the vein which seems most prominent, yet which is not one of the small superficial veins. The arm is scrubbed with soap and water, and then washed off with alcohol. A tourniquet made of towel or a piece of rubber is then tightened above the biceps muscle and the patient is instructed to open and close his fist. This stimulates the dilation of the vein, and I find no difficulty in introducing the needle. It is very easy to prove when the needle is in the vein or not, by withdrawing a drop or two of blood, the dark red blood being seen at the butt of the syringe just beyond the needle. This is immediately returned into the vein and, following it, the solution is slowly injected, a procedure which takes a matter of two or three minutes.

Care should be taken not to cause a sensation of burning. I invariably ask the patient if such a sensation is noted, and if so, withdraw the needle immediately, because it has been found that the injection is entirely painless, while, if the solution is injected into the subcutaneous areolar tissue, it causes quite a noticeable smarting, which, by the way, is not at all dangerous unless a whole dose is inadvertently injected under the skin.

The patient almost invariably notices a creosote taste in the mouth, or smells it, before the injection is completed, and, in passing, it is well to add that this has a very important psychic influence upon the patient. They realize that the injection is going directly into the blood, and pay up accordingly. Further than this, I have noticed that patients sometimes refer to a feeling of warmth throughout the body, which is undoubtedly due to the stimulating effect of the solution upon the vessels throughout the system.

I have already taken sufficient of your time with these preliminary remarks, and will now briefly report to you a few cases which come prominently to my mind, and which, I believe, will convince you that the possibilities of this method are great and that I am not overstating matters to you at all. All of these individual patients referred to here are still alive and can be seen. One can also quickly prove whether the results obtained are real results or simply temporary results, such as those following the administration of strychnine, morphine and other drugs which have a potent but none the less passing influence.

Miss E. P., aged 11, was brought to me by her mother on January 4, 1911, suffering from tuberculosis of the left ankle joint and the instep, the duration of which was about one year. For seven months previous to this time she had been under treatment by the usually recognized methods, including rest, plaster casts, etc., until the left leg was atrophied and almost useless. I gave her four intravenous injections of Bannerman's solution during January and February, giving 6 cc. at each dose directly into the median cephalic vein. Improvement began in about a week after the first injection and has continued until the present time. She is in school and has gained twelve pounds. Her crutches were discarded three months ago, she now runs and plays as most children of her age are accustomed to do, and only a very slight enlargement of the instep yet remains.

Mr. A. S., 55 years of age, consulted me December 11, 1910, for swelling of the feet and ankles, and also complained of defective vision. On examination, found him suffering from chronic interstitial nephritis with albumin-uric retinitis. The urine contained 3 per cent. albumin, and a number of casts were found. The retinitis was severe enough to prevent him from attending his duties as bartender for several days.

His treatment consisted of intravenous injections of this same solution on December 11 and 18, 1910, and January 13 and February 1, 1911, with salines every morning to favor elimination. Improvement was continuous from the first injection, and an analysis of the urine made on August 6th last shows no trace of albumin whatever. While I admit that this period may be a little short in which to consider this man entirely cured, still the results are very encouraging to both of us, and I, of course,

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will keep him under observation for several months to come.

J. B., aged 26, had been under my care and treatment for four or five months with all the usual clinical symptoms of pulmonary tuberculosis, such as night sweats, hectic fever, cough, etc. The diagnosis was confirmed by microscopic examination of sputum, many tubercle bacilli being present. There was also an involvement of the larynx, causing severe hoarseness, with at times almost complete loss of voice.

I gave him his first intravenous injection May 28, 1910, at weekly intervals, up to July 16, 1910. In all eight injections were given, with appropriate symptomatic treatment, and good nourishing food. He has made a complete recovery, has gained in weight, and resumed his clerical occupation last April.

Miss L. B., aged 17, student, was operated on for appendicitis at a sanitarium in a neighboring city in May, 1910, and during the operation it was found that she was also suffering from tuberculous peritonitis, the peritoneum in portions being studded with nodules, which microscopical examination proved to be undoubtedly tuberculous. She recovered from the operation and was put on antituberculous treatment, without improvement. She finally became bed-fast and was very nervous and anemic. The abdomen was tympanitic and quite painful, and she suffered from severe headaches. This is the condition in which I found her on December 5, 1910. On that date I gave her an intravenous injection of Bannerman's solution, and also on the following days of December 12 and 21, 1910, and on January 7, 1911. She began to improve from the first injection and made an uninterrupted recovery, gaining in all fourteen pounds. She has since been under careful observation and to this time there has been no signs of a recurrence and she is evidently enjoying good health.

Mrs. L., aged 62, had been a sufferer from chronic articular rheumatism for the past seventeen years. Relief was obtained temporarily by resorting to different sanitariums for treatment. The joints most seriously involved are the knees, ankles and wrists. This patient consulted me in the early part of July, 1910, and received six intravenous injections during July and August, with the results that over one year has passed during which she has been perfectly well, doing her housework, and with no symptoms of a return of her rheumatism.

I could easily take up several hours in reporting similar cases, but these few will undoubtedly show you what this method of treatment has accomplished in my practice. I want to say that I have selected these varied cases from over two hundred, in order to show you that the range of this treatment is by no means limited. Wherever the increase in the quality of the blood is likely to be of advantage, there you will find a use for this method. It makes no difference whether the patient is tuberculous or rheumatic; if they are anemic and their resistance is low and needs to be increased, here I have found a very satisfactory means of increasing it.

I have heard it said by some physicians who read my previous communication on this subject and also from those who have spoken to friends, who have since become interested in this method, that it was a "cure all," but I assure you that I have not found it so. It does not cure all our patients, but I have to admit that it has done more for me, from a professional, scientific and financial standpoint, than any other one remedy that I have had the good fortune to meet in my twenty-three years of practice, and I doubt not that many of those here to-day will have the occasion to corroborate my statement at a later date.

A Successful Method for Inserting a Suitable Needle into a Vein for Intravenous Injections.

By JULIUS C. DAVIS, JR., M.D.,
QUINCY, FLA.

The object of this article is not intended to convey anything to the reader original, *in toto,* but to endeavor to alter, or make some necessary changes in the technique as formerly used in giving intravenous injections without cutting down on the vein, a method which in my hands has proved as satisfactory as the one about to be described.

This method requires careful manipulation on the part of the operator, and by one (I might further add) skilled with a given amount of tactile sensation, in order to avoid the difficulty, and at times an almost impossibility, of introducing a suitable needle into a vein without piercing through the vessel. Then exposing the vein becoming an absolute necessity.

Technique:

1. The usual preparation of the patient with the preliminary aseptic precautions.

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2. A tourniquet is applied above the elbow, or the thumb of the assistant placed directly over the basilic or cephalic vein (the one best adaptable to the case) about two inches above the formation of the vein, exerting enough pressure to arrest the return venous flow, which will render the vein movable, palpable and tense.

3. The operator now extends the forearm as much as possible, resting the elbow of the patient in the palm of his left hand, firmly grasps his hand around the elbow.

4. The needle held in the right hand of the operator is placed at an angle of 60 degrees to the arm of the patient, and gently forced down upon the common ulnar (the one of preference) or the median basilic before they merge together to form the basilic. At this point you can feel the resistance and tension of the vein, then lower the needle to an angle of 30 degrees and gently force into vein. By slightly moving needle from side to side you will notice the vein move with the needle *in situ*, lower needle parallel with arm and slige gently up the vein for about an inch into the basilic, beginning about one-half inch below the origin of the basilic.

5. You are now ready to attach your rubber tubing to needle, and when through withdraw needle quickly, holding cotton saturated with alcohol firmly over place of exit for a moment.

Now the vein of choice depends altogether on the kind of a patient you have. Use the one most superficial. I find it very easy to use the common ulnar or median basilic just before they coalesce and form the basilic. However, I have used the radial and median cephalic.

We sometimes meet with a patient where only two veins are found at the bend of the elbow, the radial and ulnar, which are continuous with the cephalic and basilic.

There are many advantages over the method of cutting down and exposing the vein, *i. e.*, it saves time, minimizes the danger of an infection, and is more unique in technique.

Another advantage over venesection is, that the median basilic is crossed by some of the branches of the internal cutaneous nerve, and these may be divided in the operation of venesection, giving rise to "traumatic neuralgia of extreme intensity."

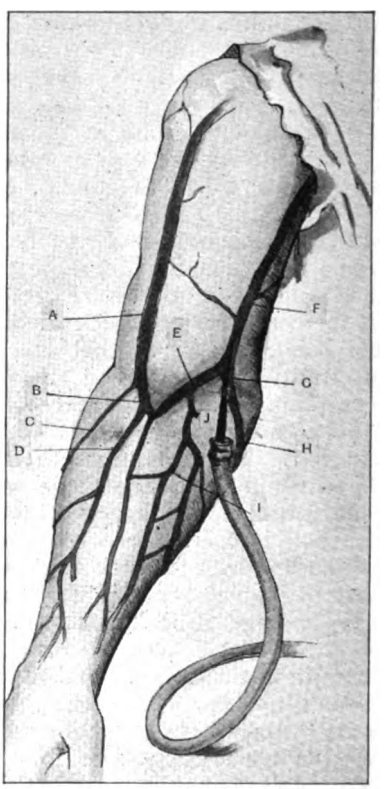
The technique I have outlined is far more acceptable to the patient, avoiding the presence of an ugly scar, which he abhors, especially in this day of salvarsan medication. He fears the scar may at some future date be a source of casting an undesirable reflection upon his moral conduct.

The above procedure I have used a number of consecutive times with very gratifying results. The use of a local anesthesia has never been found to be necessary. Ethyl chloride spray could be used in highly strung and nervous patients.

The old procedure of thrusting the needle into the vein has often been attempted, and most every one soon discards this method in favor of venesection with all of its disadvantages.

It is very essential to have an accurate knowledge of the anatomical relations before attempting either method. But I cannot see why one who understands the anatomy of the part, with careful manipulation and a small amount of skill, should fail to make a success in using the above technique.

Jordan House.



A. Cephalic vein. B. Median cephalis vein. C and D. Continuation of the cephalic vein down the forearm. E. Median basilic vein. F. Basilic vein. G. Common ulnar vein. H. Posterior ulnar vein. I. Median veins of the forearm. J. Needle introduced into the common ulnar vein, and passing up into the basilic vein.

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Complement Fixation Test in the Diagnosis of Gonococcic Infections.

By ADELAIDE W. PECKHAM, M.D.,
LANSDOWNE, PA.
Professor of Bacteriology in the Woman's Medical College of Philadelphia.

THE May number of the *American Journal of Medical Sciences* gives an extremely interesting article upon this subject by Schwartz and McNeil, who have made a study of this test in the Department of Clinical Pathology of Cornell University. This test has become pretty well established during the past five years through the work of several investigators. In this article, the writers give a detailed report of their results in applying the test to 324 human sera.

The sera used have been obtained from both acute and chronic gonorrheal infections, from persons having no history of gonorrhea, and from patients having various diseases other than gonorrhea. Both systems, the antisheep and Noguchi's antihuman, have been applied in each case.

Owing to the fact that there are many strains of gonoccocci and that they differ considerably one from another, the writers concluded that as the serum of a patient infected with one strain might only fix the complement in the presence of an antigen of the same strain, a polyvalent antigen might be needed to detect the presence of gonorrheal antibodies every time that a single strain would do so. Acting upon this suggestion, they prepared an antigen in the following manner: From 9 to 12 different strains of gonoccocci have been used at various times. They were grown upon Tholman's media, containing 2 per cent. of glucose; then 2 c.c. of sterile 0.85 per cent. saline solution was added to a 24- to 48-hour-old culture, and the growth of cocci scraped off the surface of the media with a flat platinum loop. This suspension was then decanted into a sterile bottle and placed in an inactivating oven at a temperature of 56° C. for 30 minutes; it was then placed in a shaker and agitated for 24 hours, after which it was centrifugated; the supernated fluid was then pipetted off and placed in a tightly corked sterile bottle. a capillary drop of lysol being added. This was kept in the ice chest until required for tests.

Later experiments led the writers to believe that a better antigen might be prepared by allowing the suspension of cocci in saline to remain for several days, without shaking, at a temperature of about 37° C., as a more thorough extraction seems to take place by so doing.

Titration of the Antigen.—Schwartz and McNeil used as a positive control either the serum of a patient who has been treated with injections of dead gonococci or Torrey's antigen serum, as prepared by Parke, Davis & Co. This is serum from an animal immune against many different strains of gonococci. The quantity of antigen to be used is the quantity that will completely inhibit hemolysis of the given suspension of red blood-cells in the presence of definite amounts of positive serum and complement; provided that double this amount does not interfere with complete hemolysis of the cells, using a normal serum and complement.

As a daily routine, the exact complement value of the guinea-pig serum used is determined by a titration of the complement with the given quantity of red blood-cell suspension and given quantity of amboceptor of known hemolytic strength; and, secondly, the antigen is titrated against a positive serum. By this means known quantities of amboceptor, complement, antigen, and red blood suspension are known.

The details of experiments are given in tables which are very interesting. Table I gives the technique of the day; table II, titration of various strains of gonococci separately, and mixture of all the strains against Torrey's antigonococcic serum; table III, titration of Torrey's serum against previously determined quantities of antigen; table IV, titration of separate strains and mixtures against the serum of rabbit immunized by inoculation with certain strains; table V, the same; table VI, testing serum of rabbit immunized to gonococcus culture, strain A against antigens prepared from the various strains and their mixtures; the quantities of these used having been previously determined by titration; table VII, testing of clinical cases giving a positive reaction.

From the results given in these tables the following conclusions were drawn:

1. That the different strains of the gonococcus differ markedly one from another, so much so that the antibodies produced by the toxin of one strain will, in many instances, not bind complement in the presence of antigen prepared from another strain.

2. Antigen prepared from many strains

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fixes complement whenever one of its component strains does so. Working with an antigen composed of many strains, one will obtain a positive reaction in the great majority of cases of gonococcal infection, and the use of the polyvalent antigens simplifies the procedure so that it can be of practical value for diagnostic purposes. The polyvalent antigens tested against the serum of animals immunized to several different varieties of bacteria gave a negative reaction in every variety except Flexner's antimeningococcus serum, which was positive.

The results following tests in a large number of clinical cases indicate the complement fixation test for gonorrheal antibodies will have a definite place in the differential diagnosis between the various chronic conditions arising from gonorrheal infection and similar conditions, due to other causes. In acute anterior gonorrheal urethritis the phenomenon of complete fixation is not obtained. The writers attribute this to an insufficient absorption of toxins to stimulate the production of antibodies.

All cases treated with bacterins gave strong positive reactions. This would seem to confirm the idea that antibodies specific for the gonococcus are readily formed in the human system.

They discuss the significance of a positive reaction and conclude from the data at hand that a positive reaction denotes the presence of recent activity in the body of a focus of living gonococci. All cases treated by bacterins gave positive results during the period of injection, while the blood of several patients examined four months or more after the injections had been stopped gave negative results, and several patients who gave a positive reaction when examined again after four or five months of careful treatment, resulting in clinical cure of the gonorrheal infection, gave negative results.

This greatly increases the diagnostic value of this test, as seen in instances mentioned by the writers. In men or women supposedly cured of gonorrheal infection of the genito-urinary tract, a positive reaction would be construed to mean that they are still capable of infecting others through sexual intercourse; in operative procedures on the genital tract in women a positive reaction would, in some instances, be strongly against the advisability of surgical interference; in a pregnant woman a positive reaction would call special attention to the necessity of prophylactic measures regarding gonorrheal ophthalmia in her own child.

Swinburne, of New York, calls attention to this paper in the *Archives of Diagnosis*, July, 1911. He presents this test from a clinical aspect, having furnished Dr. Schwartz 237 cases for blood examination from his clinic. This new test of the blood he considers the most important advance made in years in the study of gonorrhea. In an investigation to determine what kind of cases give a positive reaction, they found the results were generally negative in cases of long standing and in primary infections early in the disease. The earliest case to give a positive reaction in primary gonorrhea was one in which it had existed for two weeks. Of 30 cases of chronic prostatitis with a previous gonorrheal history, 19 were positive and 11 were negative. In 35 cases of disease of the verumontanum, with a history of previous gonorrhea, 14 were positive and 21 negative. This test has a field of usefulness similar to that of the Wassermann test in syphilis.

An Investigation of the Subject of Dentifrices and Mouth Antiseptics.[1]

By JOSEPH HEAD, M.D., D.D.S.,
PHILADELPHIA.

THE question of mouth antiseptics is not a simple chemical question. Chemicals may destroy the germs, but at the same time so lower the natural resistive action of the tissues that the final condition of the mouth after treatment may be worse than better.

The enzymes of the saliva unquestionably play an important part in tooth preservation, so that a weak mouth-wash that co-operates with the saliva may accomplish much more than a powerful antiseptic that while destroying the infection also destroys *the* protecting agents.

Experimental means of determining the strength of mouth antiseptics *in vitro* are subject to many fallacies. In the year 1904 I performed the following experiment: An old bridge, covered with bacterial deposits freshly removed from the mouth, was cut up into small pieces, so that the bacterial deposits were undisturbed. These bacterial deposits were then submerged in various antiseptic solutions at mouth temperature for various intervals of time, at the end of which time the deposits were

[1]The reader will kindly refer to the author's previous article on "The Treatment of Pyorrhea Alveolaris," in the June, 1911, MEDICAL COUNCIL.—EDITOR.

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washed in sterilized water and test cultures made from them on blood-serum. Peroxide of hydrogen made the best record of the antiseptics tested. But even with a 3 per cent. solution of peroxide of hydrogen and a submersion of five minutes, growths were nevertheless obtained on the blood-serum.

Clinically, peroxide of hydrogen gives excellent results in reducing oral infections, according to the experiments of Paul Bert and Reynard. They found that all fermentations caused by bacteria were at once stopped by peroxide of hydrogen and the ferment was killed, while no effect was produced on enzymes and physiological ferments such as are found in the gastric juice and pancreas; so that it would practically have no effect on digestion, and yet it would inhibit the interfering action of micro-organisms.

Peroxide of calcium, as recommended by Dr. Kirk, is entirely too caustic to be used pure in the mouth. When placed in any quantity on the tongue it makes a bad burn that lasts for days. However, the peroxide of magnesium, as described in the codex of the British Pharmocopœia is bland and, in my opinion, more useful. It contains 4 per cent. free oxygen, and is only soluble in about 15,000 parts of water (practically insoluble). This powder can be freely taken into the mouth in any quantity, liberating for every hundred grains enough oxygen to make 270 drops of a 3 per cent. alkaline peroxide solution. The commercial powder has just about the cutting grit of precipitated chalk, and when finely powdered practically none at all. When taken into the mouth and rinsed for from two to five minutes, as mentioned before, the oxygen is freely liberated. When the mouth is evacuated large quantities adhere to the interstices and necks of the teeth. This tendency may be turned to great advantage by the patient, for, while this powder is practically insoluble in water, it is readily converted into a soluble magnesium salt by any acid that may chance to be present. And so the case with peroxide of magnesium is this: It is most valuable to use just before going to bed. If an abrasive is desired a suitable quantity can be placed on the brush and the teeth thoroughly brushed with it. Afterwards a teaspoonful may be taken into the mouth with a sip of water and the mouth rinsed as above described, for from two to five minutes. When the mouth is evacuated the powder adhering to the teeth all night long acts as an ever-present guard against free acid, for as acid is formed it is at once neutralized by the magnesium hydrate, which is automatically set free by it. And if by any possibility the powder is swallowed the acid of the stomach at once turns it into the laxative magnesium salt. This powder, when used by itself, seems to combine all the attributes of a dentifrice, an antiseptic and an antacid.

Abrasion of Enamel by Tooth Powders.—All thoughtful dentists must have noticed that there is a terrible disease that affects the mouths of those who are particularly careful of their teeth, and this shows generally between the ages of forty and fifty by the complete disappearance of the enamel in ever-spreading foci on the anterior surfaces of the front teeth. This has been explained by many as arising from an acid diathesis of the system—gout, rheumatism, indican, and the absence of the sulphocyanates, not to speak of the acid calcium phosphates. Now, no one would deny that there may be a systemic cause for this disease, but to my knowledge there has not been reported one such case in the mouth of a patient who did not carefully use tooth powder and brush, and as the loss of enamel is confined almost entirely to incisors, canines and bicuspids, it would seem strange that a systemic disease would not attack all of the teeth of the mouth with a certain amount of impartiality. Therefore, I felt that, while the disease might be partly systemic, it did not have, of necessity, to be so. The fact that those most scrupulous with the tooth brush and powder made me feel that the effect of tooth brush and powder on the teeth should be investigated. The effect of various foodstuffs on the teeth should also be investigated, since the decalcifying action of food on the teeth would naturally be most felt on the anterior teeth, as any erosive agent would be diluted and perhaps neutralized by the saliva in its progress to the back part of the mouth.

I, therefore, undertook a rather voluminous series of experiments to determine just what would happen to the enamel and cementum of a tooth when brushed with an ordinary tooth brush and saliva, when brushed with certain mouth washes, when brushed with certain standard proprietary dentifrices, and finally what happened when brushed with plain precipitated chalk. During the last three years I have been

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working on a micro-dynanometer, and have at last perfected one that will measure to 1/700,000 of an inch. I thought I should have to use this for my measurements. But a few experiments with brushing a tooth in a vise with an ordinary tooth brush for ten minutes made ravages so easily discernible with the ordinary Brown & Sharpe micrometer that I finally used this simple measuring apparatus, reserving the machine with microscopic attachment for another field of investigation. The first great difficulty lay in preparing the specimen so that it could be accurately measured and remeasured at will to 1/20,000 of an inch. This was finally accomplished by grinding one side of the crown and root of freshly extracted teeth, soaking them in water over night, wiping them dry with a towel and measuring the cemental diameter and the enamel diameter before the tooth could perceptibly dry. Great care had to be used, as it was found that cementum and dentin when dried would contract, and enamel when dried became so distorted that it seemed to expand, although this phenomenon might be only due to distortion. The tooth, being carefully measured at the cemental margin and at the highest portion of the enamel, was then placed in a vise, with gutta percha fitted at the neck to represent the gum, and then was brushed with saliva, and then with saliva and dentifrice, or whatever else it was desired to test.

The first test was made to determine what was the effect of brushing the enamel and cementum for ten minutes with a new brush and saliva alone. No enamel loss was discovered, but a loss of 1/100,000 of an inch of cementum was noted. But, as many other tests with plain saliva discovered no loss of cementum, it was finally decided that the first test was an accident and that the plain brush and saliva seemed to have no harmful effect on cementum or enamel.

The following tooth preparations were tested in the same manner, a new brush being used with saliva and dentifrice for each test, brushing ten minutes:

Colgate's paste, with ten minutes' brushing, caused a loss of 1/10,000 of enamel and 26/10.000 of an inch of cementum.

Numerous tests proved that ten minutes' brushing with a new brush, Calox and saliva cut the enamel 1/10,000 of an inch and the cementum 23/10.000 of an inch to 83/10,000 of an inch. The great variations in the cutting of the cementum was no doubt caused by the action of the brush against the gutta percha at the neck. If the gutta percha guided the edge of the brush into one groove a deeper cut would be obtained than if the bristles slipped upon it and thus expended the grit on the gutta percha.

Lyon's powder caused no loss of enamel, but 66/10,000 of an inch of cementum.

Sanitol powder gave a barely measurable loss of enamel and 121/10,000 of an inch of cementum.

Lilly's paste caused no erosion of enamel, but a loss of 73/10,000 of an inch of cementum.

Kolynos caused no loss of enamel and a loss of 7/10,000 of an inch of cementum.

Dr. X.'s powder caused a loss of 1/10,000 of an inch of enamel and 33/10,000 of an inch of cementum.

I made a test of Dr. X.'s powder first, because, being one of the leaders in the cause of prophylaxis, his powder would be supposed to contain the best general opinion concerning dentifrices; and, second, because I was able to make a test on one of his patients that had come to me for treatment.

I noted in this patient's mouth deep grooves along the necks of all the teeth, both upper and lower, as far back as the second molars. The patient told me that Dr. X. had instructed him to use plenty of powder and brush the necks of the teeth and gums thoroughly. I was much interested, but what particularly interested me was a silicate cement filling in the neck of an upper second bicuspid with a deep erosion groove between the upper margin and the gum. I asked how long since the filling had been inserted. The patient said a year, not over a year and a half. I then concluded this groove must have been made since the filling was inserted, for, surely, no dentist would have put in a filling leaving such a deep groove between it and the gum. I took an impression of the neck of the tooth where the groove was and have made an amalgam model for preservation. The groove is 536/10,000 of an inch deep, or about 1/20 of an inch, and this groove, according to the patient, was cut during a period of not more than a year and a half. This frightful state of destruction only too plainly shows what our present prophylaxis policy would really accomplish if it were really carried out. This patient was very anxious to get the worth of his money, so when, according to his

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statement, he was told to use the powder lavishly and brush the gums and teeth thoroughly, he did it. The only reason most of our patients up to the present time do not suffer similarly as did Dr. X.'s patient is because they do not brush the teeth thoroughly. The only reason the powders with grit are so popular, in my opinion, is because they make the front teeth presentable with a minimum amount of labor. In brushing their teeth some patients wash for high neck, not for low neck, and, while this is partly due to laziness, it is also due to the inefficient unscientific teaching on the part of the profession who recommend methods of tooth brushing that a simple inspection of the mouth will show do not cleanse the teeth.

Having investigated some of the prominent proprietary dentifrices, I next applied the same tests to the standard chemical substances that might prove of value in mouth prophylaxis. I found, as would be expected, that ordinary precipitated chalk would cut the cementum and enamel. Thinking there might be an excess of silica in it, I procured precipitated chalk from the Baker Chemical Company, guaranteed to be free from silica. It seemed to cut more than the others, but as it was quite gritty, the variations in the erosion of the chalk can no doubt be put down to large or fine grit. If chalk is to be used in a dentifrice it should be reduced to an impalpable powder, but as this is commercially hardly to be obtained, it would be well to give up the use of chalk in dentifrices altogether. I next tried the peroxide of magnesium in reference to its grit, and found in its coarse state that it had a friction grit on the enamel and cementum somewhat less active than precipitated chalk, but nevertheless a decided grit. When, however, the peroxide of magnesium was ground in an agate mortar to impalpability no such erosion was attained, thus showing that in peroxide of magnesium we can have a grit slightly less than chalk down to no grit at all, and also a tooth powder that will give abundant oxygen, so as to have a real antiseptic action on the mouth. I next tried the frictional action of perborate of sodium, mixed with saliva, on a tooth and was not able to note that the Brown & Sharpe micrometer showed any erosive action. This was particularly gratifying, as perborate of sodium is a bland salt than can freely be placed in the mouth without caustic action, and liberates 9 to 10 per cent. of oxygen, and in the presence of any acid that may be present forms a strong alkaline peroxide solution.

When patients come to me with spots of dentin showing underneath the enamel of the front teeth, I prohibit them from using grit dentifrices of all sorts and recommend that they brush their teeth with perborate of sodium alone. And when these patients have been carefully instructed in the proper act of brushing their teeth perborate of sodium seems quite able to keep the teeth clean without the aid of grits.

True Chemical Mouth Disinfection.—I referred in my previous article to the value the silicofluorides in the treatment of pyorrhea alveolaris. Recently, at my suggestion, Roessler & Hasslacher, of New York, have prepared some fluoperborate of sodium that contains 18.5 per cent. of free oxygen and has the fluoride antiseptic property also. In spite of the great amount of oxygen liberated, it is bland and pleasing to the taste and needs no flavoring. If it can be produced commercially, this salt may prove one of the most delightful beneficial mouth-wash preparations we yet possess.

Enzyme Antisepsis.—There is one other type of mouth antiseptics that, while it is in its infancy, may be of inestimable value in the future. I have reference to the antiseptic derived from bacterial by-products and enzymes. The thoughtful man must have always felt that ordinary mouth antiseptics were working on a fundamentally wrong basis. He has felt that agents for destroying the bacteria, as well as the enzymes of the mouth, while they temporarily aided the tissues, might eventually render the mouth more sensitive to bacterial inroads. What we unquestionably need is a physiological antiseptic that will do its work without depressing the resistive vital force of either the oral tissues or the enzymes of the saliva. Such an antiseptic may be found in pyocyanase. An excellent article covering the subject of its theory and action is that of Musham, in the *Deutsche med. Wochenschrift*, 1908, volume 34, page 231. The method of production, he says, is to grow the bacillus pyocyaneus until inhibition takes place. This inhibition is supposed to be due to the production of an enzyme. This enzyme is pyocyanase, and it is obtained by filtering the three weeks' old culture through a Berkfeld filter and evaporating to one-

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tenth of its volume. He states that the substance has the power of dissolving not only the *Bacillus pyocyaneus,* but also those of diphtheria, cholera, anthrax, streptococci, staphylococci, etc. Some bacteria, notably the tubercle bacilli, are not affected by it. He added 1 c.c. of pyocyanase to 5 c.c. of culture of these various bacteria and found that twenty-four hours later these cultures were sterile. Trautmann (*Munchener med. Wochenschrift,* 1909, page 561), used it in the form of sprays, swabs and injections in diseases of the throat, nose and ear with beneficial results. This pyocyanase is a type of true mouth antiseptic that might work wonders in the prevention of those diseases that take their origin in the mouth and throat.

An extract from the salivary glands of the pig might, in its own way, prove as valuable as adrenalin, the extract of the suprarenal capsule. Along these lines lies an interesting field for future investigation, but until the perfect enzyme is discovered we should not fail to take advantage of the peroxide and fluoride antiseptics just mentioned, since while they destroy bacteria chemically, they do not destroy the enzymes and ferments either of the mouth or of the stomach. And the fact that they do not destroy the enzymes, but seem to have a selective tendency for the pathogenic germs, may be one of the reasons they so rapidly restore inflamed oral tissue to a state of health, since instead of fighting the enzymes, they may assist them by reducing the number of bacteria against which the enzymes may be able to contend.

In closing, let me briefly go over some of the points that might properly be emphasized. Tooth powders containing grits are harmful to both enamel and cementum and the patients should be taught to brush and cleanse the teeth without their aid. All stains that cannot be removed without the aid of tooth-cutting grit should be removed only by the dentist. Very finely powdered peroxide of magnesium, with 10 per cent. of soap and a suitable flavoring agent, will make a valuable antiseptic peroxide powder, and when left around the teeth at night will prove an invaluable antacid. For those who do not wish a semblance of grit in their powder, flavored perborate of soda can be used, both on the brush and in ten-grain tablet form as valuable mouth-wash tablets.

The 23 per cent. bifluoride of ammonium mixture recommended for the treatment of pyorrhea is not mentioned here, because the paper deals with general mouth antiseptics. But I cannot bring this paper to a close without emphasizing the value of a saturated solution, in water, of sodium silicofluoride. As stated, it forms a .61 per cent. solution. This may be held in the mouth for from two to five minutes, three times a day, by patients under treatment for pyorrhea. And while in some cases it does not retard the progress of tartar on the teeth, in many cases it most emphatically does, and as a supplement to the bifluoride treatment and proper scaling, its healing effect on the inflamed gums is so satisfactory as to be little less than marvelous. It is non-poisonous and cheap, being readily purchased C. P. at 75 cents a pound, which is enough to make one-half to two-thirds of a barrel of mouth wash. And, above all, being a fluoride, it has the fluoride antiseptic qualities without affecting the porcelain fillings.

In recommending these new antiseptics for the mouth I wish to emphasize the fact that my observations as to their effect on the teeth and gums have been largely clinical and macroscopic. I believe that a close study of the first stages of enamel decalcification, such as occur before the enamel is roughened or whitened, will prove that many foodstuffs and ordinary therapeutic remedies are directly responsible for much of the general tooth deterioration of the present day. These new antiseptics of which I have spoken, I believe, are therapeutically valuable as an aid in treating the oral tissues, but whether in time they may prove to have undesirable action of a less harmful nature than the grit of chalk or the acid of lemon and carbon dioxide, no one is in a position to say. Nevertheless, as my next scientific work lies along this line, I hope to give more data on this important subject in the future.

1500 Locust street.

The Natural Position of the Body in Defecation.

The best position of the body for the complete accomplishment of the act of defecation is the natural one, in crouching. The anus is in the best position for opening and the rectum for emptying its contents, and the parts liable to injury from strain are guarded by their natural protections, certain hernial orifices, for example. Failure of defecation upon the usual seat will often at once issue successfully if the effort be renewed forthwith in the physiological attitude.—Sir James Sawyer, of London, *Lancet,* September 16, 1911.

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Determination of Sex in Embryo.

EDITOR MEDICAL COUNCIL:

I would like to ask the aid of my medical colleagues in helping me to gather data which will enable me to ascertain whether the following laws are of any value in the determination of the sex of the embryo in man. I have become very much interested in this subject through reading an admirable little book recently published by the Eugenica Publishing Company, of New York, under the title of "Sex Determination and its Practical Application," by L. A. Calhoun. The laws are as follows:

I. If a mother wishes for a girl, and continues persistently to remain on her left side for a few hours after the presence of the fertilizing spermatozoa in the uterus, but especially refraining from lying on her right side for at least twelve hours, then, if she is normal, she will give birth to a girl baby.

II. If she wishes for a boy, and continues persistently to remain on her right side for a few hours, but especially not lying on her left side for at least twelve hours after the presence of the fertilizing spermatozoa in the uterus, if the mother is normal and carefully follows these directions, she will give birth to a boy baby.

I would be grateful for any data on this subject. The laws are based on the theory that the left ovary of woman produces female offspring, while the right ovary produces male offspring; and that gravitation determines to which side the spermatozoa go.

JOHN J. MULLOWNEY.

Peking, China.

Atrophy of Breasts After Lactation.

EDITOR MEDICAL COUNCIL:

There is a subject that is seldom, if ever, touched upon in a medical journal that would interest many physicians, which I would like to have discussed in your valuable journal. I refer to the fact that so many women lose the natural plumpness of their breasts on account of a sort of atrophy of the glands after lactation and are not able to restore them to their natural condition. While this question has, perhaps, no relation to health, yet so many women are very desirous to regain their form and beauty that it would seem to be a subject worthy of being considered seriously by physicians and not left to charlatans.

Now, I hope you may see your way clear to bring this subject before your subscribers and seek to find out if there is any medicine or treatment that will, in any substantial degree, restore the breast to its normal condition. Perhaps you can give valuable suggestions in this matter and start the subject going.

WILBUR M. L. BEATTY, M.D.,
4027 Georgia avenue, Washington, D. C.

The Reporting of Venereal Diseases.

EDITOR MEDICAL COUNCIL:

The medical profession, with all its shortcomings, is the most noble in the world, in spite of Dr. G. V. R. Merrill's sarcasm in the October issue of your journal. If some representatives of this profession do not believe in the efficacy of registration of venereal diseases and in the panacea of the law in regulating vice, they have the right to their opinions in this free country of ours. It is very often a sign of megalomania to believe in one's own nobility of character and attribute sordid motives to those holding a different opinion. How does the doctor know that the objection "The reporting would drive all this class of patients to the quacks" is made in the interest of the physician's pocket? Perhaps it is made in the interest of society and of the patient, who will have less chance to be cured in the hands of a quack and will thus increase the danger of contamination.

The argument "How do you know till you try?" is really a fine piece of logic. The next time some lunatic will propose to build a tower to the moon, we will have to consider it worth while trying, because it has never been tried before. No, my dear noble and logical friend! Before a thing is tried it ought first to be logically reasoned out and found, at least, theoretically practical. If from the outset, reason rejects an undertaking as impractical, it is folly to try it.

The *naïveté* of those who compare venereal diseases with any other kind of diseases is really touching. They are the same innocents who would like to cure the immorality of the divorce evil by a law rendering divorce difficult. Yet if they took the trouble to learn by the experience of other countries, France, *e. g.*, could teach them quite a different lesson. For centuries the economical law of France did not allow any divorce. The result was that almost half the couples in Paris lived together without the sanction of priest or judge.

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The fact is, we cannot regulate sex by law. The only remedy lies (and here I fully agree with the doctor) in education, but not in the education of the adult, after he has tasted from the forbidden tree of knowledge, either in the form of masturbation or prostitution. Education will then have no effect. Who has ever heard that persons infected with gonorrhea or syphilis, after all their pains and sufferings, have abstained from illicit venery? They surely had the best education by the experience on their own body. Or do medical students, who ought to know all the dangers of meretricious venery, abstain from this practice? The best education seems to come a little too late, if given to the adult.

We have to begin our education with the infant, and we have to teach the child sexpurity before it has experienced any sexual excitement. Such a process is very slow, to be sure. But an evil that is as old as the human race cannot be eradicated in one generation. Besides, what does a century amount to in the history of humanity?

B. S. Talmey, M.D.
12 W. 123d street, New York City.

Murphy's Drop Method of Introducing Fluid Into the Rectum.

The editorial in the September issue of Medical Council, calling attention to the continuous method of introducing liquid into the rectum as devised by Dr. John B. Murphy, the present president of the American Medical Association, has called forth communications from a number of our readers as to where such apparatus might be obtained. While instrument makers carry special forms of this apparatus, a little ingenuity on the part of the physician will find the means at hand for supplying continuously small amounts of water to the rectum. For the sake of giving this information without elaborate text, we have had redrawn the apparatus used by various observers (Figs. 1 to 6). In the home-made apparatus prepared from a tea kettle, a Davidson's syringe, and catheter, the nozzle of the syringe may be held in place by means of adhesive plaster. On page 406 of this issue will be found a new application for this method in the treatment of acidisis by infusions of sugar directly into the rectum.

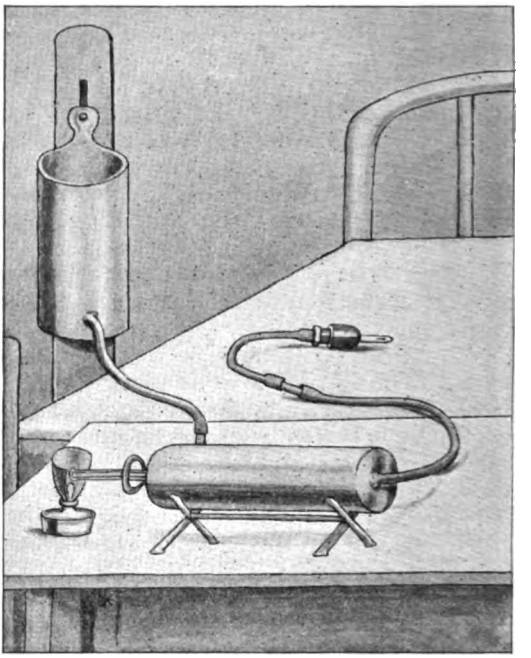

Fig. 1.—Dr. John B. Murphy's apparatus for giving proctolysis, consisting of a water holder, a metal heating chamber (Fig. 2), rubber tubing, a catheter, and a self-retaining redal tip, through which the catheter passes.—*Journal of the American Medical Association*, April 17, 1909.

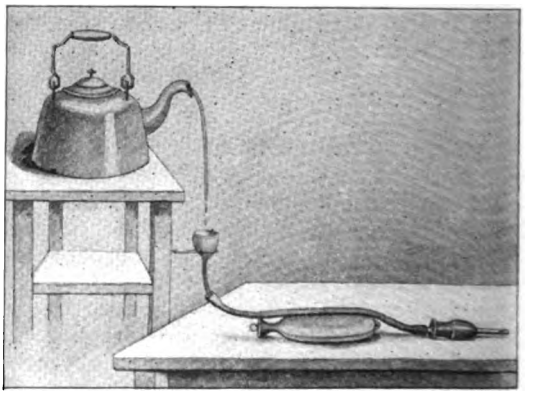

Fig. 2.—Dr. Henry W. Cattell's home-made apparatus for administering Murphy's treatment, consisting of tea-kettle filled with warm water, into the spout of which has been introduced some wicking, which drops water into the bulb of a Davidson's syringe, which has been cut in half, the tubing connecting therewith running over a hot-water bag, covered by a Turkish towel The ending of the apparatus is the same as in Fig. 1.

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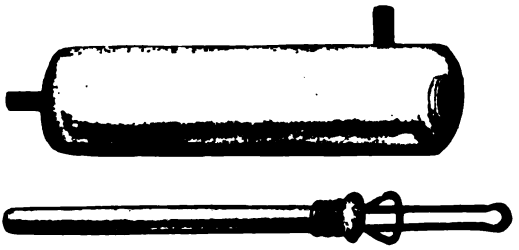

Fig. 3.—Metal heating chamber made of block tin, lined, with opening for heating unit, either electricity or an alcohol lamp, as seen in Fig. 1. The water enters by the upper opening and passes out at the side toward the left.

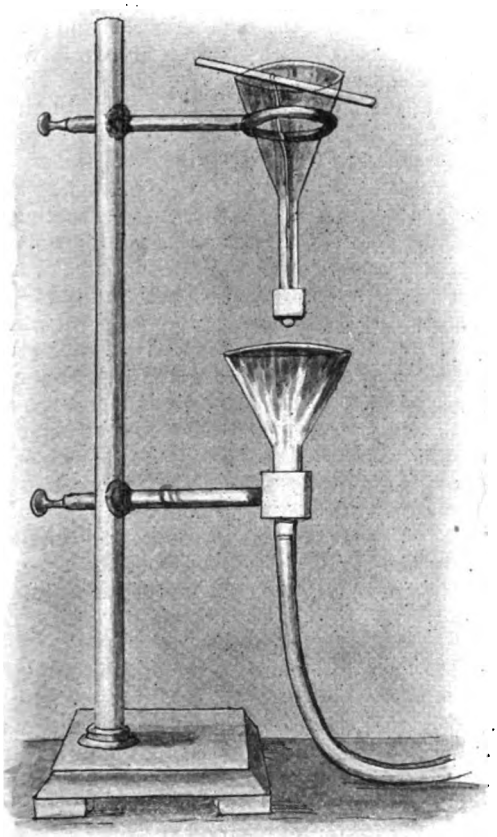

Fig. 4.—Dr. Samuel E. Newman's apparatus for giving continuous enteroclysis. The upper funnel is provided with a rubber plug (the plunger of an antitoxin syringe has been used) to which a non-corroding wire is attached by means of a small shot. Another small shot is fastened on the other end of the wire, and this is held in the groove of a small piece of wooden board. Pushing the board toward the center of the funnel lengthens the wire and loosens the rubber plug, while pulling the little board from the center of the funnel shortens the wire and tightens the rubber stopper. An incandescent light placed in the lower funnel will help to keep the saline solution from cooling. —*Jr. Amer. Med. Assoc.*, April 17, 1909.

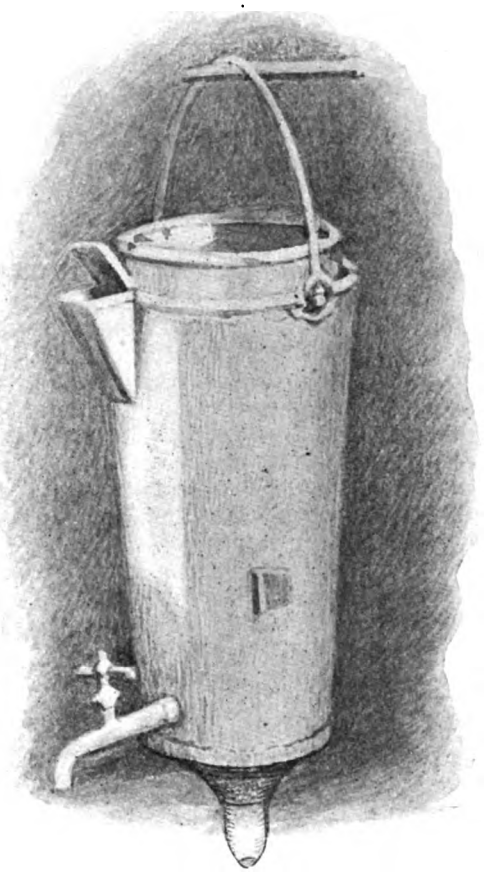

Fig. 5.—Dr. Wechster's apparatus ready for use, the tubing being attached to the lower opening of the glass irrigator seen in Fig. 4.—*Jr. Amer. Med. Assoc.*, April 17, 1909.

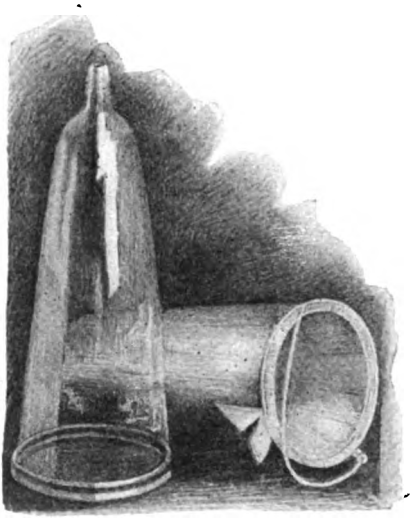

Fig. 6.—Dr. B. B. Wechster's apparatus for keeping enteroclysis solutions hot by means of a glass irrigator and socket.

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Test for Indican.

Presented at the Semi-Annual Meeting of the Susquehanna County Medical Society.

By SAMUEL BIRDSALL, M.D.,
SUSQUEHANNA, PA.

Now that indicamuria is attracting more attention, it is important that physicians should familiarize themselves with the tests for indican in the urine.

Indican, as defined in the supplementary volumes to the *Century Dictionary*, is "The alkali salt of indoxyl-sulphuric acid." The indol, which is formed during the process of intestinal putrefaction, is in part oxidized to indoxyl and absorbed. In the body it then unites with sulphuric acid, namely, sodium, or potassium sulphate, and in this form is known as animal indican. As such, it appears in the urine. Normally the amount which is thus eliminated is small. Larger quantities are met with in those pathological conditions which are associated with an increased degree of intestinal putrefaction. The test for indican in the urine is based upon the decomposition of the substance by means of a mineral acid, and the oxidation of the liberated indoxyl to indigo blue."

As the word indol is used in the above description it may be well to define it.

In Vol. IV of the *Century Dictionary* we find: "Indol, a crystalizable compound, having feeble basic properties formed artificially, in the reduction of indigo blue by zinc dust. It is also produced in the putrefaction of albuminoids, but is antiseptic in its effect."

We would infer, from the above, that a small amount of indican, in the urine, is scarcely to be regarded as pathological. A large amount would, no doubt, indicate a degree of intestinal putrefaction more or less injurious to health.

Tests.

I have learned and used the following:

No. 1.—"Add, in a test tube, 10 c.c. each of urine and chemically pure concentrated hydrochloric acid. To this mixture add three drops of a ½ per cent. solution of potassium permanganate. If indican is present in the urine there will be formed a purplish cloud in the fluid in the test tube. Then add a few drops of chloroform; then one or two drops more of the permanganate of potash solution, and a few more drops of chloroform, or a total of 5 c.c. of chloroform. Then shake vigorously for a few seconds. As a result the purplish coloration will be replaced by a deep blue, which is due to precipitation of the indican by the chloroform. The amount and intensity of the precipitated indican determine the extent of the putrefaction changes going on in the alimentary tract."

No. 2.—"To 5 c.c. of concentrated fuming hydrochloric acid add 20 drops of urine and warm, but do not boil, the mixture. With normal urine the color will be yellow, or a very pale violet, while with increased indican a darker violet or blue will be obtained. If the hydrochloric acid is not sufficiently concentrated add one drop of nitric acid before adding the urine."

I regard test No. 1 as reliable, and have generally used it. I have used No. 2 with some specimens of normal urine, free from indican, but in no case did the color remain yellow. I have used it with some specimens where test No. 1 showed well-marked indicanuria, but the blue color did not appear with this test. I, therefore, concluded that test No. 1 is much to be preferred.

About a year ago I made at least sixty tests for indicanuria. Three-fourths of them on myself, the balance on my patients, of various ages. I was then 68 years of age. Without going into details I will mention only the conclusions at which I arrived:

(1) Indicanuria is most frequent in middle and advanced age.[1]

(2) I did not find that indicanuria was associated with, or appeared to be accountable for, marked impairment of health. Theoretically, however, it would seem probable that intense and continuous indicanuria would lead to seriously damaging effects on the health.

(3) That indican is frequently found in the urine in the forenoon, while in the afternoon it may be entirely free from that substance without the use of any medication.

(4) The taking of alkalies, like sodium, potassium or lilkium have a tendency to increase the amount of indican, or favor its appearance.

(5) Drinking four to six ounces of buttermilk three times a day did not appear to have any beneficial effect in preventing the appearance of indican in the urine, the theory of Metchnikoff to the contrary notwithstanding.

If, as some have stated, indicanuria is a condition of serious import, undermining the health and reducing longevity, it should be more thoroughly studied, and the general practician should consider the possibility of its presence in every case of impaired health, especially chronic and obscure cases.

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The Business Side

OF MEDICAL PRACTICE

While we, as physicians, desire to be scientific students and practitioners of medicine, yet we desire also, for the welfare of our dependent ones and for the sake of our standing in the community, to secure a fair compensation for the services we render to our fellowmen.

The Kansas Law Regulating Promotion Companies and the Sale of Stocks and Bonds.

In our October issue we referred to this law and stated that we would give further information. The following letter, very kindly sent us by Hon. J. N. Dolley, Bank Commissioner, will be of great interest to all who wish to see dishonest operations stopped and honest business encouraged.

To THE MEDICAL COUNCIL:

I have your favor of the 19th, addressed to the Secretary of State, which has been referred to this Department for attention.

I enclose you herewith a copy of the law which went into effect on March 15, 1911, which is the law you mention.

I consider this one of the best laws ever placed upon our statute books. Since its enactment we have received about five hundred applications for permits to sell stock in Kansas, and of this number but forty have been granted such permits, showing you something of the per cent. of the general run of stock companies which are doing an honest business.

After careful investigation I found that fully 90 per cent. of all the money invested in these stock promotion schemes has been an absolute loss. I further found that Kansas was being robbed to the tune of from four to six million dollars each year. The greater per cent. of these companies are companies which have no intention whatever of returning the investor anything on his investment or even paying the principal back.

Immediately after the taking effect of this Act, a large number of the companies packed their grips and left for parts unknown, one company in particular, which I know of, going as far as Winnipeg, Manitoba, in order to get clear away from the jurisdiction of Kansas and the United States. There are some companies still operating in Kansas, but we have been so rigidly enforcing this law that there are not very many left.

I have succeeded in interesting some of the States surrounding Kansas in this matter, and am of the opinion that bills will be presented to their next Legislature and a law similar to ours enacted.

I think that it is a law that ought to be on the statute books of every State in the Union, and anything that your valuable paper may do to create such sentiment for such a law will be very highly appreciated, as I realize that if a universal movement is created, that it will be much easier for us to curb the fakirs and blue sky merchants in Kansas than it would otherwise be.

I can assure you your interest in the matter is very highly appreciated. The magazines and newspapers can do more to enforce this law than any other agency, as a large effectiveness lies in publicity, and your valuable magazine is to be commended for the splendid way it is endeavoring to protect its readers.

Great stress is laid upon the supervision of banks throughout the entire world, and statistics will show that where $1 has been lost through bank failures, $99 has been lost through investments in gold bricks and blue sky, and when one looks at the matter in this light, they can see the importance of legislation along these lines.

If I can assist you further or give you any more information regarding this matter, please command me.

Thanking you in advance for your kind interest in the matter and for any favors extended, and trusting you will be able to help in this matter, I am,

Very truly yours,

Topeka, Kan. J. N. DOLLEY,
Bank Commissioner.

[We are greatly indebted to Mr. Dolley for his hearty response to our letter of inquiry. He very kindly sent a copy of the law in question, which it would not be convenient to publish here in its full length and technical detail. It is enough to say that it is fair and just to all honest concerns, but a terror to the swindler and the impractical visionary. Our readers should show this to their local editors and candidates for Legislature and work for such a law in each State.—ED.]

Doctor, now is a very important time to begin an active campaign for the collection of your accounts. Most of your patients will have money during the next two months if they ever do. If you do not secure your share now, they will spend much of it uselessly at Christmas time anyway.

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Eliminating Lodge Practice.

EDITOR MEDICAL COUNCIL:

Dr. Madden (page 394, October COUNCIL) decries the lodge system of practice in a very able and lucid manner, but offers no remedy to kill the microbe. The editor asks for contributions from those who have gotten rid of the evil in their communities. I shall explain how I handled the lodge system in one lodge here.

We have 13,000 population, a score of physicians, a number of whom can be induced to enroll as lodge physicians. For years the Eagles and the Owls have each had lodges here with the club rooms and lodge physicians. Two years since an organizer for the Moose appeared on the scene, began to solicit members, and asked me to become one of the lodge physicians. Inside of a minute I formulated a plan that I thought would eliminate the evils of the system, so far as this one lodge was concerned; I accepted, and asked him to secure a physician I named as another of the three wanted. Before he could see him I telephoned the doctor and disclosed my plan. He accepted. The third man was so much nearer the typical doctor that the organizers like to have for the position of lodge physician that they favored him with the majority of the examinations.

Well, the lodge was instituted and for "some unknown reason" our booze-fighting doctor was not elected to membership. For "some unknown reason" no other doctor, who might possibly stultify his independence by accepting a position as lodge physician, has been elected to membership. For "some unknown reason" we two physicians were placed on the Committee on By-Laws. This committee, in the by-laws submitted, eliminated all matter pertaining to a lodge physician and recommended that the $2.00 per year intended for him should be deducted from the annual dues. We had some difficulty in getting our by-laws adopted; but when both physicians absolutely refused to do the work they acquiesced. I think, however, that when we got through with our debate but few would care for the service that could be procured for $2.00 a year.

Two or three ethical physicians can, by similar methods, remove the objectionable features of any of these lodges in any city. In all these orders it is optional with the local lodge as to whether or not it has a lodge physician. It can be eliminated when the good doctors get inside and use the proper methods. The organizers do not want lodge physicians for themselves; but they do want members at $5.00 a throw, and the services of a physician at $2.00 a year is the strongest argument they can give a prospect.

Incidentally, I want to state that we have no club room nor booze; and with these evils removed the ritualistic work, the noble concepts, the incentive to moral betterment, as well as its practical measures of relief, make this lodge the equal of any that I am acquainted with.

I believe orders of this kind are with us to stay, and whether needed or not they will continue to be instituted so long as organizers care for the very liberal fee offered. The lodges are to be commended when rid of three evils—lodge physicians, club rooms and liquor. These evils can be kept out of any new lodge and kicked out of most of the old ones, if two or three good doctors get inside and work.

F. F. MENDENHALL, M.D.

Ellwood, Ind.

Contract Practice in Buffalo.

The Medical Society of Erie County, N. Y. (Buffalo the principal city), realizing the extensive growth of lodge practice and other contract practice, have discovered, by the aid of a committee of investigation, the following causes for this development (*Buffalo Med. Jour.*):

1. Lack of knowledge of the ethics of medicine.
2. Professional jealousy.
3. Indifference of the older practitioners.
4. The example set by some of the older practitioners.
5. Overcrowding of the profession.
6. The tolerance of this state of affairs by all medical societies.
7. The commercialism of the age. The professional struggle not only for the "almighty dollar" but also for the mite(y) cent.
8. The chief and absolute cause of all, however, we found to be the complete disorganization of the medical body. This last cause which is the absolute, and the cause a priori, is the one to which we must give our attention, namely, the disorganization of the medical body.

This evil has been growing insidiously in all its various forms for some time, and has been passed unnoticed by the powers which should have throttled it in its infancy.

The committee (Dr. Edward E. Haley, Buffalo, N. Y., chairman) proposed the following resolutions:

Add a section to Chapter II of the Constitu-

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tion and By-Laws to be known as Section 13, and to read as follows: No one shall become a member of this society or continue as such who engages in contract work, unless it be governmental in character, but this shall not prohibit an agreement for a particular case nor apply to examinations for an adequate fee.

We further recommend: 1. That the president appoint from time to time at his own discretion, special committees to use their influence on any man who continues this inethical practice whether he be a member of this society or not.

2. That a special committee be appointed to confer with the membership committee to devise ways and means to get all desirable men in this society.

3. We recommend that the proper authorities of this Society bring this matter to the attention of the State Society for the purpose of gaining its support.

4. That this society meet more frequently, that its members become more united, and that self-interests be put aside for the common good of all.

The following comment is offered by the committee:

We feel that the above resolution, amendment and recommendations are not too radical. The various faddists, quacks, pseudo scientists, and charlatans, are the sins of our neglect. Are we going to commit more sins of omission? The evils dealt with in this report and practised by the supposedly regular members of the profession, should not be tolerated any longer. We must separate the inethical from the ethical practitioner. We must ostracise him as we have the advertising quack. Nay, we must do more. We must use antagonistic measures if persuasion fails to convince him of his error.

Fee-Splitting: A Reply.

A question is not properly settled while ideas on it are suppressed. As we have published numerous articles against the practice fee-splitting, we now publish the following communication on the other side by a well-known New York gynecologist and surgeon.

EDITOR MEDICAL COUNCIL:

To the close observer it appears that there is a great deal of hypocrisy hidden behind the cry against "fee-splitting." Not only the raisers of the cry but even the faint excusers of the practice of fee-splitting take it for granted that the practice is immoral. Dr. E. W. Watson, in the last issue of your journal, is sure that the same act that splits the fee splits also the moral code, but why, please? Where is the moral wrong? Why do not these super-moralists define what is moral and then show that fee-splitting does not conform with the general accepted moral law? In the business world nobody would ever think to decry as immoral the paying of a certain commission to the man who brings in business. When a man has the choice to procure certain business to one of several equally good men, why should not the chosen one pay for the good will? So reasons every business man. Why should the medical profession have a different morality?

There are two objections made against the practice: (1) The surgeon who would otherwise charge a certain price for an operation, now knowing that he has to give a commission, will add the amount of the commission to the charge; (2) The general practitioner will recommend inexperienced young surgeons from whom he expects a commission instead of sending the case to the man with the great name who will condescend to gobble up everything for himself.

Both objections vanish when the full light of criticism is thrown upon them. If there were a certain fixed price for a certain operation (say $200 for appendicitis), abuse might be possible. The dishonest surgeon will add to the price the amount of the commission and the patient ought to know of the arrangement. But there is no fixed price for operations as in the world of merchandise. The surgeon will charge the highest price the patient can afford to pay (from $50 to $10,000), whether he expects to give a commission or not. There is no fear that the surgeon may charge more, for if there is any possibility of getting more from the patient he will do it anyhow. If a patient comes to me with appendicitis, whether he comes of his own accord or sent by a general practitioner, and I think he is able to pay, say, $1,000 for the operation, I will ask $1,000 in either case. When the patient says that he can not pay more than $100, I will have to take $100, whether I have to pay a commission or not. Hence it does not concern the patient in the least what I do with the money, whether I give a part or the entire sum to his doctor or to my butler. I can do with my money as I please, not only from a legal point of view, but also from the moral aspect. Where there is no certain settled price for a certain commodity, when a surgeon may charge one patient $10,000 and the other patient $50 for the same operation, anybody who knows anything of logic will tell you that overcharge is simply impossible. Thus the objection of overcharge can be dismissed as illogical

The second objection, that the general practitioner in the expectation of a commission may send his cases to incompetent men, may also be dismissed as improbable. The practitioner, out of sheer egotism, will never send a case to any man whom he in the last suspects of being incompetent of operating the particular case, commission or no commission. The practitioner jeopardizes his reputation and practice by such a

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act. Self-preservation will teach him to send a serious case to the old well-known surgeon who, in case of accident, will protect him by his great name. The young surgeon cannot protect the practitioner, and the latter has to take the responsibility upon himself. In case of a failure he will be blamed for not having called the celebrated man. Hence the commission can never be the incentive for the practitioner to send his cases to young incompetent surgeons. If he does send to a young surgeon he does it because he knows that the young surgeons are as competent to operate as those who were lucky enough to get a position in a large hospital. The practitioner, therefore, often prefers the young surgeon by whom he is treated as an equal and of whom he expects fairness. In this way the surgeons with well-established names who seem to think of having a monopoly upon all the surgical cases lose a part of their business, hence the outcry against the fee-splitting practice. For this they ought not to be blamed, everybody has a right to cry when hurt. But they should leave morality out of the play. It is a question of business, pure and simple.

Now, a word about the remedy the decriers of the fee-splitting practice prescribe to the general practitioners. I really admire the naivete of the suggestion that the general practitioner should educate the public to pay them a decent fee, and they would not need to take any commissions. Granted that such an education is possible, when do our friends expect the education to be finished to bear any fruit. If they have any common sense at all they must know that it would not happen in the present generation (I fear not even in the next) and the present generation must also try to make a living.

But the finances of the practitioner do not concern me. If he wishes to be hypnotized by the brilliant high-sounding names, it is his affair. My objection is directed only against the hypocrisy which wishes to make us believe that the practice of paying for the good-will which is considered perfectly proper and moral in any other branch of human affairs—that the well-known principle of *"quid pro quo"*—is a violation of the moral code when the medical profession is concerned.

Dr. B. S. Talmey.
12 W. 123d St., New York.

Every infant and child should wear a tag, "Please do not kiss me."

Columbian-Sterling Receiver.

We are sorry to note that the Columbian-Sterling Publishing Company, publishing the *Hampton-Columbian Magazine* and other publications, recently had an involuntary petition in bankruptcy filed against them and a receiver was appointed. Their alluring prospects to stock purchasers were altogether too rosy, as they held out expectations that are almost never realized in the publishing business. All the investors in publishing enterprises should be only those who are engaged in the business themselves. On the average, it is a less profitable business than farming.

We believe these people published a good and useful magazine and that their intentions were honest. Their business methods seem to have been a bit rash, especially since they took in Hayner, a notorious get-rich-quick operator, formerly connected with a bucket-shop gang.

A subscriber inquires about the National Rating League, 438 West Sixty-third street, Chicago. Any of our readers who have had experience with this concern will confer a favor by writing us. They propose to collect accounts by means of a "Rating Book," in which the prompt payers will get a good rating and the non-payers will be rated accordingly.

CONCERNING QUESTIONS, ETC.

We are receiving a great many questions concerning particular companies, investments, lands, etc. It becomes a physical impossibility to answer all of them in detail and keep up the rest of our editorial work, so we have formulated the following rules:

1st. When questions have a general application, that is when we think the answer to that question will be of interest to all of our readers, we will answer them in this column.

2d. When questions have not a general application, but we have the information at hand, we will answer them by mail if postage is enclosed.

3d. When questions have not a general application and we have not the information at hand, we will return them with "Unable to answer" written on them, if postage is enclosed.

We solicit contributions from our readers for this department. Anything that has helped you in the financial side of your life, made collections easier, concerning fees, where conditions have arisen in your locality that threatened the physician's living and have been successfully overcome, what forms of investments you have found safe and profitable, and what you have found unsafe and unprofitable.

Let us have them all.

If you have problems arising in this side of your life or in your community that you have not solved, let us have them. Perhaps physicians somewhere else in the country have successfully met these very problems and will be glad to help other members of the profession in the same difficulty.

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BEST IDEAS FROM RECENT LITERATURE

The Face.

The first part of the patient we see is the face, and much information can be gained by a close scrutiny thereof. The following outline, compiled from various sources, may be of use as a reminder in this connection:

DULL AND VACANT: Mental depression or apathy.

Typhoid Fever: Lips cracked, bleeding and moving in low, muttering delirium; teeth covered with sordes; marked apathy.

Pneumonia: Often typhoid state; dusky flush on one or both cheeks.

Typhus Fever: Like typhoid, but with dusky hue and injected conjunctiva.

Alcoholism: Bloated, flushed, heavy, expressionless.

Beginning Meningitis: Patient gazes oblivious into space; other organic brain diseases similar.

Myxedema: Bloated, heavy countenance.

Scleroderma: Expressionless; lips cannot be moved; mastication impossible; eyes and nose deformed.

Adenoid Disease: Seeming prominence and puffing of cheeks and nasal bones; constantly open mouth and stupid expression.

Chronic Nasal Obstruction: Open mouth, pinched nose.

Idiocy, Dementia, Hydrocephalus.

Cretinism: Flat, broad nose, swollen eyelids, thick lips, impassive face, lolling tongue, dwarfish stature; fatty deposits in neck; thyroid absent or atrophied.

Mongolism: Smiling, grimacing, oblique palpebral fissure; marked epicanthus; tongue large and often protruded, but not swollen; brachycephalic skull; thumb short, little finger short and curved; present at birth.

Strumous Diathesis: Heavy, round face; thick, muddy skin; lumpy figure.

Paretic Dementia: Placid, indifferent; trembling lips; later bilateral drooling.

Facial Paralysis: Staring, vacant, glazed, one-sided immobility and wide open eye; lips hang apart and saliva drools.

Neurasthenia: Weary and careworn features.

Melancholia: Hopeless, plaintive expression.

Insomnia: Slight pallor; clouded conjunctiva; dark circles under eyes.

Paralysis Agitans: Pathetic immobile, mask-like features; eyebrows raised; patient looks straight ahead; "pill-rolling" position of hands.

Early Muscular Atrophy of Faciohumeroscapular Type: Sleepy and listless with drooping lids; patient cannot whistle or close lips entirely.

Early Disseminated Sclerosis: Stupid and stiff; mouth may be half open.

Pseudohypertrophic Paralysis: Lips apart, saliva drooling.

Bulbar Palsy: Dribbling saliva.

PAINED, ANXIOUS OR EXCITED: Pinched and drawn look about nose if pain in chest; frowning if pain in head; upper lip drawn up with abdominal pain.

Peritonitis: Upper lip sometimes retracted; patient lies motionless; appendicitis a common cause.

Flatulent Colic: Patient rolls and presses on belly.

Pneumonia: Anxious and preoccupied, with dilating nostrils.

Croup: Frightened, with startling eyes; struggling for breath.

Hysteria: Vacant, fatuous, mobile, silly smile; drooping and trembling of upper eyelid.

Epileptic Attacks: Gnashing teeth, foaming mouth, clonic protrusion of tongue.

Acute Mania: Great excitement and distortion.

Acute Pulmonary Phthisis: Hunted look; wide-open eyes, quivering nostrils, hectic malar flush.

Malignant Disease: Straw-colored, anemic; often stony-hard look; emaciation.

Cardiac Dyspnea: Nostrils dilating, mouth constantly open; pallor or cyanosis.

Angina Pectoris Thoracic Aneurism, Intestinal Obstruction.

Pericarditis: Extremely anxious.

Bronchial Asthma: Anxious, cyanosed, struggling for breath; squeaking rales.

Second Stage of Labor: Twitching muscles of lip and about eye.

Continuous Pain in Head: Profoundly depressed expression; hand held to head.

Earache: Sometimes cringing of head and elevation of shoulder; hand held to ear.

Pain in Neck: Cringing head, shrugging shoulder, listening attitude.

Severe Injuries: Anxious look.

Exophthalmic Goiter: Pale and fearful or ferocious; exophthalmos, goiter, tachycardia.

Chorea: Face distorted by involuntary grimaces.

Acute Hemorrhage: Pallid, anxious, restless eyes.

Ovarian Cysts: Face shriveled, elongated, anxious, careworn; nostrils wide; angles of nose and mouth drawn down; space above eyelids sunken and hollow; pallor.

Smiling in sleep from colic, worms or indigestion.

Suspicious or revengeful look in paranoia and delusions of persecution.

ASYMMETRIC, SWOLLEN OR SHRUNKEN: Slight asymmetry in most persons.

Congenital Defect: Usually with wry-neck.

Facial Hemiatrophy of Young Children: Gradual, sometimes with painful twitchings.

Facial Hemihypertrophy.

Excessive Fatness.

Acromegaly: Massive, with enlarged bony parts, particularly lower jaw.

Myxedema: Face like full moon; no bony enlargement.

Leontiasis Ossea: Bones enlarged.

Megalocephalic: Head, face and neck enlarged.

Osteitis Deformans: Face like a triangle, base upward; shafts of long bones roughened.

Rachitis: Head square, usually large, erect; projecting forehead; large, non-bulging fontanels.

Hydrocephalus: Head much enlarged, rounded or globular, drooping; fontanels large, tense, bulging; eyes prominent and displaced downward; face comparatively small; expression vacant.

Renal Disease: Pale, puffy, worn, weary, ivory

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white in acute, ashy gray or sallow in chronic; lower eyelids in children may look pearly or pellucid.

Chronic Alcoholism: Bloated, flabby face; watery, injected eyes; furred tongue; morning nausea and vomiting.

Malaria: Pallid, sallow and slightly puffy.

Cancer: Waxy or straw-colored anemia with emaciation; patient usually over 40.

Trichinosis: Edema of lids at onset, disappearing in a few days, reappearing later.

Mitral Lesions in Children: Face flat, somewhat blurred or indistinct.

Measles: Face red and swollen, with reddened, weeping eyes and running nose.

Erysipelas and Smallpox: Face swollen and deformed.

Mumps: Parotid swelling, pushing out lower lobe of ear.

Old Cases of Hemiplegia: Mouth droops slightly on affected side.

Tubercular Leprosy: May be leonine facies.

Risus Sardonicus in tetanus, strychnin poisoning and rarely in diaphragmatic pleurisy and general peritonitis.

Apparent augmentation of size of face in apoplexy, acute mania, convulsions (particularly epileptic), obstructive diseases of heart with dropsy, scurvy and pneumonia.

Emaciation in phthisis, chronic dyspepsia, gout, splenic leukemia, protracted fevers and most chronic diseases; very rapid in cholera, cholera infantum and pernicious intermittent fever; also in pronounced sepsis (pinched nose, sunken eyes, ashy color, beads of sweat) and hereditary syphilis (pinched, shriveled, wrinkled, pale, weazened, old-man-like; snuffles; ulcers and striating scars at corners of mouth and anus; saddle-nose later, with peg-shaped, notched permanent incisors and infantile look).

Discolored: Dark red, mahogany, purple or violet in deficient decarbonization.

Flushed in fevers generally.

Full and flushed in pregnancy and with uterine tumors.

Sharply defined flush, more on one cheek than other, in severe pneumonia and hectic fever of phthisis.

Pallid in fright, severe hemorrhage, syncope, surgical shock (feeble pulse, cold sweat, immobility), anemia and chlorosis (greenish yellow, often obese).

Parchment-like in hereditary syphilis and alcoholic hepatic cirrhosis.

Grayish or bluish from cardiac or respiratory morbus ceruleus or coal tar antipyretics.

Unnaturally full and congested in alcoholism, organic heart disease and apoplexy.

Capillary congestion of nose in aged or in cirrhosis or obstruction of hepatic circulation; also from wearing veils.

Capillary congestion of cheeks in gout, lithemia and chronic interstitial nephritis.

Dark rings under eyes at menstrual periods and from sleeplessness.

Bruise-like swellings around one or both orbits in scurvy.

Thickened upper lip, delicate skin and fair complexion in strumous children.

Puffy edema and pallor in parenchymatous nephritis.

Cachexias: Yellow, waxy, anemic; weakness and wasting.

Cancerous: Dirty yellowish, yellowish-brown or brownish-green; patient usually over 40.

Syphilitic: Very anemic, with muddy light yellowish tint.

Malarial. Very anemic, puffy, pallid; sometimes bronzing and discoloration.

Strumipriva: Myxedematous increase of subcutaneous tissue.

OCULAR APPEARANCES.

Eyes unduly prominent in myopia and exophthalmic goiter, and in high blood pressure due to capillary collemia from excess of uric acid.

Wide open in facial paralysis and most cases of coma and on approach of death.

Eyeballs fixed, eyebrows raised and lids drooping (Hutchinson facies) in ophthalmoplegia externa.

Parted eyelids of infants during sleep from digestive or nervous disturbances.

Very brilliant eyes in meningitis, scarlatina and mania.

Sclera pearly white in anemia and tuberculosis—yellow first in jaundice.

Glazing of cornea a grave sign.

In diseases of one side of brain, eyes often turned toward (paralytic) or away from (irritating, spasmodic) side of lesion.

DYSPNEIC FACIES.

Defective Inspiration: strained neck, protruding eyes, dilating nostrils, pallid face, inspiratory retraction.

Asphyxia: (Expiratory Disturbance): Face flushed, puffed, bluish; eyes motionless, half closed, lacrimating; cervical veins distended.

Phthisis: Emaciated figure, red, prominent cheeks, fine nose, jerking inspiration.

Hippocratic Facies: Extreme exhaustion threatening collapse. Nose sharp and skin drawn; eyebrows knitted; eyes and temples hollow and sunken; eyelids slightly parted; cornea somewhat glazed; ears cold and contracted, with shriveled lobes; skin of forehead hard, tense, dry; face pale, greenish livid or leaden-colored; lower jaw a little dropped.—*Denver Medical Times and Utah Medical Journal.*

Which Are the Five Most Practical Medical Books of To-day?

Answers to this query, propounded in the last issue of the MEDICAL COUNCIL, have been received from Dr. Joseph Hasbrouck, Dobbs Ferry, N. Y.; Dr. C. J. Mesinger, Butler, N. J.; H. D. Moore, M.D., Danbury, Conn.; Dr. H. R. Fairfax, McCornas, W. Va.; H. W. Smith, Roadhouse, Ill.; Dr. C. R. Clarke, Auburn, Ind.; Dr. Frank Virdin, Wilmington, Md.; Dr. George P. Galloway, Federalsburg, Md.; Dr. Karl Greiner, Sparta, Mich.; Dr. C. A. Burton, Holland, N. Y.; Dr. Henry Borst, Robertsdale, Ala.; Dr. T. M. Stewart, Cincinnati, Ohio; Dr. G. F. Hewen, Toledo, Ohio; Dr. A. D. Bundy, Osage, Iowa; Dr. P. S. Carpenter, Troy, Pa.; Dr. J. T. Jones, Jackson, Tenn.; Dr. W. L. McBrien, Staunton, Ill.; Dr. W. K. Statler, Oakridge, Mo.; Dr. G. I. Armitage, Murray, Iowa; Dr. C. W. Simison, Hawley, Minn., and Dr. J. W. Du Val, Wichita Falls, Texas.

The five books receiving the highest number of votes to date of going to press (October 19) are:

Butler's Diagnotics of Internal Medicine.
Holt's Infancy and Childhood.
Osler's Practice.
Gray's Anatomy.
Potter's Materia Medica and Therapeutics.

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The Coming Year

The year 1911 has been the most prosperous THE MEDICAL COUNCIL has ever experienced. The year's growth has equaled that of the three most prosperous previous years. We wish to extend our warmest thanks to our over twenty thousand loyal readers for their support and help.

We believe there is only one way to successfully publish a medical journal. That is:—To concentrate all the effort and energy on the reading pages. To give the reader matter that is practical, brief and to the point; matter that the general practitioner will find useful in his every-day practice. To make each succeeding number better fill these needs. And to keep the advertising pages honest and clean. The circulation and advertising will then take care of themselves.

We have splendid plans for 1912. We give the gist in the following titles:

1st. USE OF TUBERCULINS IN GENERAL PRACTICE. A practical series of papers, each paper complete in itself.

2d. MODERN ADVANCES IN THE TREATMENT OF SYPHILIS. Four papers. By Dr. Henry W. Cattell, Philadelphia, Pa.

3d. DISEASES OF THE RECTUM. Continuation of Dr. Lewis H. Adler's papers.

4th. THE CAUSES AND BEST METHODS OF TREATMENT OF INFANTILE PARALYSIS. With the rapid spread of this disease to all parts of the country every general practitioner should give particular attention to it.

5th. RECENT METHODS IN THE TREATMENT OF TUBERCULOSIS. These papers will not be a rehash of the milk, eggs and open-air treatment, but will give new matter of practical interest.

6th. REMEDIES FOR LOCAL APPLICATIONS. We announced a series of papers on this subject two years ago, but concluded, after careful consideration that the papers did not give the new information of a practical character that we knew our readers wanted. So we did not publish them. We believe we now have just what is needed.

7th. CAUSES AND TREATMENT OF BALDNESS. This series of papers, by a man who has been successful in the treatment of baldness, will give information that will produce results.

All of these papers will be practical and concise, written with the purpose of giving information that the general practitioner will find valuable in his daily practice.

Fuller plans will be announced in the December issue.

Doctor, we are not making THE MEDICAL COUNCIL bigger. Instead, we are making it better. Size (usually padding) is never an indication of merit. The need is for less medical literature and that of a more practical nature.

Doctor, in December and January, our clerical force will be rushed to its limit. If you can send in your renewal subscription for 1912 and your order for the books of the following practical list that you want, now, we can give you much more prompt and efficient service We will greatly appreciate the favor.

The Money Making Account Book

Taylor's Physician's Pocket Account Book.

This Account Book has several fundamental advantages that make it invaluable to the general Physician.

There is only one entry to make. This entry is an original entry, making your accounts legally impregnable. It is made at the time the service is rendered—no forgetting to make charges—and no question can be raised against the correctness of the account. After you have made the one entry there is absolutely no further bookkeeping. Accounts are always up-to-date (no posting to do) and you can give a statement whenever it is asked for. This will collect money for you that you would otherwise lose.

The book is in convenient pocket size. It is full leather bound. It is printed on a very fine, strong, durable paper. Contains 248 pages, room for over 200 accounts, also index, your own personal cash account, records of births, deaths, vaccinations, etc.

We can't give an adequate idea here of the advantages of this book. You must see it.

See it at our risk. Send ***$1.00 (the price of the book)*** and the book will be sent postpaid. Examine it and if it is not just the thing you have been looking for, return it and your money will be refunded.

No matter what account system you are using, send for this book. It will save dollars for you used in connection with your present system. If you don't think so you get your money back, and it has cost you nothing.

Taylor's Desk Account Book.

For those who don't wish to carry a Pocket Account Book we have a Desk Account Book. The form of keeping accounts is exactly the same as in the Pocket Account Book. The only difference is in size. The Desk Book is about eight times larger than the Pocket Book. The ***cost is $5.00.*** Money back if, after examination, you wish it.

A Compact, Complete, Practical Record of Cases

Taylor's Pocket Case Record.

The immense advantage of keeping a record of cases is felt by all progressive physicians. But this is hard for the general physician to do in making his daily rounds. To meet this need we are publishing a Pocket Case Record which has several distinct advantages that make it indispensable to the general practitioner.

This case record gives you the most complete, comprehensive and minute analysis of a case. Yet you do not have a great bulk to carry.

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This is gained by means of an Analytical Syllabus, embracing every item of clinical investigation you would wish to take cognizance of. This is in the front of the book.

Following this syllabus you record in the case form only those records of importance in the case before you. There are not a number of entry spaces to be left blank (waste paper that you must carry around with you) on each case form, because they do not apply to the particular case before you.

You get a much more complete analysis and history of the case than with the ordinary case record. Yet the book is much more compact. It gives room for more records in a smaller, more convenient book.

They are 248 pages, room for over 100 complete cases.

This book is of the same high quality of binding and paper, and the same convenient pocket size (decided on after years of experimentation) that the Pocket Account Book is. The price is the same, ***only $1.00, postpaid.***

As it is impossible to realize the advantages of this book without seeing it, we make the same money-back proposition on the Case Record that we make above on the Account Book.

This book will be off press in about three weeks. Orders filled in the order of their receipt.

A Real Quick Reference Handbook

Blair's Pocket Therapeutics.

We have felt that there was a need of a handy reference book on Therapeutics for the general practitioner.

A book that he could carry in his pocket conveniently when he wished to. A book that was concise and to the point. A book different from the average book on therapeutics, giving therapeutics from the practical side for the general practitioner's every-day use, and not from the ultra-scientific side of the medical investigator.

This book we now have from the pen of ***Dr. Thomas S. Blair.*** Dr. Blair has a reputation of writing books of practical value for the general practitioner.

The work is complete—everything is covered that devolves on the general practitioner. Due consideration is given to *symptomatic* treatment, an important matter to the general practitioner that is much overlooked. While this book is one purely upon treatment or therapeutics, sufficient comment is made upon underlying pathology to illuminate the points under discussion. The book is for practical every-day work. Much needed matter is given that is not found in books of a more ultra-scientific character.

Everything is done to adapt this book to ready reference use. Large, moderate and small doses are indicated in different style type. Practical prescriptions are given at the end of each chapter. A complete and comprehensive dose table is given. Many quick reference tables of all kinds, and an extended table of toxicology are given in an appendix.

There is a complete and analytical Table of Contents and Index.

The book contains 390 pages, yet printed on a fine Bible paper, after the style of the new encyclopedias, it will be only about one-half inch thick. The binding is full leather and the size the same convenient pocket size that the Pocket Account Book is. The ***price $2.00, postpaid.*** If this book isn't the one thing you have been looking for for years, return it to us within a week of the time you receive it and your money will be returned.

Off the press in two weeks. Orders filled in the order they are received.

Two Books You Need In Your Everyday Practice

Every physician owes this duty to his patients. He should make himself able to advise and help them in their sexual life when they need it. To be able to do this is one of the best foundations for building and holding a practice that we know of. The two books following are the most practical that we have seen and do not give a lot of unnecessary, objectionable matter.

The Sexual Question.

A scientific, psychologic, hygienic and sociologic study. By ***AUGUST FOREL, M.D., Ph.D., LL. D.,*** of Zurich, Switzerland. English adaptation by ***C. F. MARSHALL, M.D., F.R.C.S., London.*** Illustrated; over 500 pages. ***Price,*** in cloth, ***$5.00, postpaid.*** Sold to physicians only.

The Germans give a closer study to scientific matters of this nature than we do, and they have a more frank and truthful way of setting them forth. This is absolutely necessary for physicians who hope to acquire reliable knowledge of the subjects so that they can with any degree of skill advise their patients. This work by Forel has won such great favor in European countries that an English translation was demanded.

Woman.

A treatise on the Normal and Pathological emotions of feminine love. By ***BERNARD S. TALMEY, M.D.,*** Gynecologist to the Metropolitan Hospital and Dispensary, New York. Pages x.-258, with 23 drawings in the text. ***Price,*** in cloth, ***$3.00, postpaid.*** Sold to physicians only.

There have been so many fakes in this subject that we like to commend a book which is genuine. The most commendable part of the work is that which deals with the physical elements of sexual affection.

THE MEDICAL COUNCIL

Forty-second and Chestnut Sts., Philadelphia, Pa.

(Notice the change of address, necessitated by the need of larger quarters.)

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THE

Medical Council

A MONTHLY JOURNAL FOR THE PHYSICIAN AND SURGEON.

J. J. TAYLOR, M.D., EDITOR

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Infantile Paralysis.

ACUTE anterior poliomyelitis is a disease that, until within the past few years, has been known to most physicians in the United States but by an occasional sporadic case. In 1907 this affection became epidemic in New York, and since that year the disease has become epidemic in several other States. Pennsylvania has suffered from several outbreaks with the disease, and during the first epidemic, the Commissioner of Health, Dr. Samuel A. Dixon, instituted researches along all lines that could possibly have any connection with the disease. An article in the *American Journal of Diseases of Children*, October, 1911, by Dr. Dixon, gives interesting details of this work.

The first epidemic in Pennsylvania began in 1907 in the northwestern part of the State, and numbered two hundred cases. In 1908 there was a small outbreak in Adams County, in the southern part of the State. In 1909 there were a few sporadic cases. In 1910 an epidemic numbering 1,076 cases developed in widely separated sections of the State. The disease extended into fifty-eight out of the sixty-seven counties; 240 deaths were reported.

Elevation seems to play no part in increasing the disease, for epidemics occurred at the sea level and also at an elevation of 2,500 feet. Seasonal distribution shows that the disease is most prevalent during the height of summer and early in the fall. Sanitary conditions regarding the house and its surroundings do not afford findings that help to elucidate the cause of the disease. With regard to the age period of the disease, one-third of the 1,076 cases were in children of two years or under and more than one-half were in children between two and four years of age.

The danger of transmission of the disease does not seem to be great. Of 289 children who slept in the same bedroom with the sick only twenty-four contracted the disease.

From 748 records obtained from practicing physicians, the symptoms were tabulated as follows: The outset and early stages of the illness are marked by irritability, stupor, nausea, vomiting, retraction of the head and back, nervous twitchings, convulsions, diarrhea, constipation, retention of urine, incontinence, insomnia, sleeplessness, and sore throat. Skin eruptions were recorded in 63 instances. The temperature averaged 99° to 104° F., the average pulse rate being about 100. The results of leucocyte counts gave a high degree of leucocytosis to the ninth day of the illness.

Inoculation experiments were carried on with virus obtained from tissues and secretions. The disease was conveyed to monkeys, and also from monkey to monkey. An organism has been found by Dixon and Karsner rather constantly in the blood of children suffering with poliomyelitis. It is seen moving freely in the serum or at-

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tached to a red corpuscle. It is in the form of a spiral, and has a long, thin, curved body with bulbous extremities. Pure cultures were obtained by growth upon central nervous system agar which, after two or three generations, grew well on ordinary agar. This discovery has not yet been confirmed by other investigators.

Experiments for producing the disease by the inoculation of pure cultures of this organism are now being made.

Ipecac in the Treatment of Typhoid Fever.

IPECAC has been employed successfully in the treatment of tropical dysentery. Dr. William L. Frazier, of Mountain Home, Idaho, having been cured of an attack of dysentery by this means was lead to use ipecac in aborting typhoid fever. Six cases so treated are reported in the *Medical Record* of November 4, 1911. The ipecac treatment was begun as soon as the diagnosis was made, and was carried on in all the cases about the same as in the first, which is as follows: At 8 P. M. of the sixth day the patient was given 15 minims of the tincture of opium; thirty minutes later she was given 30 grains of pulverized ipecac in salol-coated capsules; the room was made dark, and she was required to lie on her right side for two hours, so that the capsules might pass out of the stomach as soon as possible, so as to prevent the ipecac from coming into contact with the stomach wall.

On the seventh, eighth, and ninth days of the disease the dose was decreased 5 grains each day, the dose being 10 grains on the tenth day, and this same amount was given on the tenth, eleventh and twelfth days. After the fourth day of the treatment with ipecac there was no elevation of temperature. This was the ninth day of the disease.

In the second case there was no fever after the seventh day of treatment, which was the twelfth day of the disease. In the third the fever left on the fourth day of treatment, the ninth of the disease. In the fourth there was no fever after the third day of treatment, the eighth day of the disease.

In the fifth the temperature became normal in about seventy-two hours after the ipecac treatment was begun. In the sixth case 12-grain doses of ipecac were given every six hours. At the end of sixty hours there was no fever; 10 grains were then given twice each day for a period of three days.

The tincture of opium prevents vomiting, unless the salol coat of the capsule becomes broken, when it may not do so. The fecal discharge should be examined to see whether the capsules pass without being dissolved. The capsules are coated by dipping them in melted salol.

A Specific Treatment for Tuberculosis.

CALCIUM sulphide, sodium sulphocarbolate and zinc sulphocarbolate are the drugs upon which Dr. W. C. Goodwin,[1] of Philadelphia, Pa., to a large extent depends for a specific treatment of tuberculosis. The first is a powerful general internal antiseptic; sodium sulphocarbolate is an intestinal antiseptic possessing a local action only; and zinc sulphocarbolate is strongly astringent.

Dr. Goodwin thinks that the fever in tuberculosis is largely due to intestinal tuberculosis with ulcerations. He makes a direct application of sodium sulphocarbolate, which causes a drop in temperature as soon as it reaches the site of the ulcerative areas. It may be necessary to push the drug to its therapeutic limit, which is shown by increasing intestinal irritation, and finally a diarrhea. This diarrhea may have to be controlled by zinc sulphocarbolate.

He begins treatment by giving calcium sulphide, ½ grain in three granules, every hour in the daytime and every two or three hours during the night. Then the sodium sulphocarbolate is given in 5-grain doses

[1] *Journal of Clinical Medicine*, January and November, 1911; *Medical World*, September. 1911.

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every hour during the day, the tablet being chewed and thoroughly mixed with the saliva. A gradual increase in the amount is made as the patient becomes accustomed to the remedy. Five grains are also administered before and after feeding; then 10 or 15 grains, carefully noting the effect upon the stools, endeavoring to make the increase amount to 15 to 20 grains every day. In the majority of cases daily doses of 300 to 350 grains will reduce the fever. In one case 700 grains were taken daily before the temperature disappeared. If diarrhea comes on a tablet containing 4½ grains of sodium and ½ grain of zinc sulphocarbolate will control it. Under this treatment the patient rapidly improves, the night sweats, coated tongue, and fetid breath disappear, and the stools and urine become normal.

Trachoma.

The *Monthly Bulletin of the Department of Health* of the City of New York, of April, 1911, has several articles upon trachoma, and summarizes the work done by the department to control trachoma in the school children of the city. This work was begun in 1902, and a corps of medical inspectors trained in the diagnosis of trachoma, have had constant supervision of the school children since that time.

Dr. Wootton takes up the subject from a clinical viewpoint. He considers that the diagnosis of trachoma is much more difficult in children than in adults. Pannus, the designating feature, is much rarer in children than in adults, while follicular conjunctivitis is common in children and rare in adults.

The diagnostic features of trachoma are: It is an inflammatory disease accompanied by lachrymation, secretion, or injection of the ocular conjunctiva; the most characteristic feature is the marked conjunctival hypertrophy which tends to obscure the blood vessels and fill up the spaces between the follicles so that they are scarcely seen.

In follicular conjunctivitis, the disease most commonly mistaken for trachoma, there is usually an absence of inflammatory symptoms, and the characteristic feature is the prominence of the follicles as seen upon a non-hypertrophied base.

As regards the treatment of trachoma, the writer's experience of nine years leads him to believe that medicinal treatment and expression rarely shorten the disease in true trachoma, but are effective in cases of the follicular type.

Trachoma usually goes on to the cicatricial stage, frequently with corneal complications and deterioration of vision. The only procedure likely to cut short the disease is the surgical method of excision.

Dr. Baker takes up the sanitary and administrative aspect of the subject. He says that when medical inspections of school children began in 1902 20 per cent. of the children showed the disease in a more or less active stage. Most of the cases were in children of foreign birth, showing that the disease was imported to this country.

Owing to the efforts of the department and to the deportation of immigrants having trachoma, the number of cases has been greatly reduced. There was only 3 per cent. in 1910, and the disease is of a much milder type. The diagnosis has become much more difficult because many of the lighter cases resemble other forms of eye disease.

The method of inspection of the children is very thorough. At the beginning of the school term a medical inspector visits each class-room and inspects the conjunctivæ of each child. There is continuous inspection each day during the year. The infected children are referred to a school nurse, who notifies the parents that the child has a contagious eye disease and instructs them to take it to a physician or dispensary. Non-compliance means exclusion from school. If treatment is instituted the case is watched by the nurse to see that it is continued. If the disease is sub-acute or chronic, the children are allowed to remain in school, but if there is an acute inflamma-

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tion they cannot do so. Neither the inspector nor the nurse is allowed to touch a child's eyelids on account of the lack of facilities for cleansing the hands.

Dr. Williams speaks of a proposed microscopic and cultural study of trachoma. An investigation is now being carried on in the Research Laboratory of the Health Department to determine the cause of trachoma, and to study the nature of the so-called "trachoma granules," which Halberstaedter and v. Prowazek consider the specific organism of the disease, and ascertain their practical worth in diagnosis.

Thiosinamin in the Treatment of Cicatricial Formations Following Burns.

The use of thiosinamin in hastening the absorption of scar tissue was introduced into medicine by von Hebra in 1892. He claims that it acts directly upon the blood-making organs. The leucocytes are greatly diminished in number in a few hours after its injection; but after a short time this condition is followed by a marked hyperleucocytosis, which brings about an absorption of exudates and of cicatricial and other poorly nourished tissues.

Mears, in the *Medical Record* of November 19, 1910, reports a case treated with thiosinamin: A young girl scalded her left arm over almost the entire outer and a small portion of the inner surface; and the inner surface of the forearm to the level of the scald on the outer surface of the arm. The reparative process left a mass of cicatricial tissue, which greatly disfigured the arm. Thiosinamin was used internally in pills of from ½ to 1 grain three times daily, and externally as an ointment of from 5 to 8 per cent. This treatment was carried on for three years, but not continuously. At the end of this time there was a great reduction of the cicatricial mass, the scarred surface was quite on the level of the normal integument and had lost its bluish color.

Venesection and Saline Infusion in Pneumonia.

Waterman, in the *New York State Journal of Medicine,* of May, 1911, advocates these measures as especially valuable in certain cases of pneumonia which develop alarming symptoms late in the second stage when the crisis is due. A full, bounding, rapid pulse with high tension, labored breathing, with or without edema, marked cyanosis and active delirium or unconsciousness mark these cases. Venesection relieves the engorged, over-worked heart and removes a certain amount of blood loaded with toxic material; and the intravenous injection of the saline dilutes the toxic blood, and acts possibly as a stimulant to the heart and other organs. Of eight apparently hopeless cases reported, five recovered. The two oldest patients improved after the venesection, but did not recover. This agrees with the statement that old people do not stand venesection well.

In all of the cases the infusions were followed by a chill of varying severity, and in all but one by a profuse sweating and fall of temperature.

One of the cases is especially interesting: The patient, a man, aged 39, showed on the eighth day of his illness a typical picture of a moribund person. He was entirely unconscious; both lungs were filled with mucous rales; cyanosis was marked, breathing was rapid and labored, the pulse was full and rapid, and the temperature was above 106.

Eighteen ounces of extremely dark blood were taken from the median basilic vein, and sixteen ounces of hot, normal saline solution injected. In two hours there was a chill, followed by profuse sweating, and the temperature began to fall. On the following day there was slight delirium and the edema and cyanosis were much less marked. The temperature was 99.4; pulse soft, 115; respiration, 35.

Late on the same afternoon the symptoms returned: the temperature was 104 and the

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pulse 132. A venesection was again performed, and eleven ounces of blood removed and sixteen ounces of normal saline injected. A marked improvement followed and the patient gradually recovered.

The writer concludes that in these selected cases venesection at the right time, with saline solutions given intravenously, may save many lives. He quotes Osler as saying that "Pneumonia is one of the diseases in which a timely venesection may save life." To be of service, *it should be done early*. In Waterman's cases, venesection was performed on the fourth, fifth, sixth, seventh, and ninth day, and in two cases on the eighth.

Concerning the Presence of the Embryos of Trichinella Spiralis in the Blood of Patients Suffering from Trichiniasis.

Albert H. Lamb, in the September number of the *American Journal of the Medical Sciences*, reports four cases in the Presbyterian Hospital of New York in which the blood was examined for this organism. He has been able to find a report of only four other cases during the two years since Herrick and Janeway first demonstrated these embryos in the circulating blood.

Lamb used Staübli's original method of diluting the blood with ten volumes of 3 per cent. acetic acid. In some instances the blood was obtained from the blood cultures taken for cultures. After the broth had been reported sterile, the supernatant broth was decanted and ten volumes of 3 per cent. acetic acid were added to the sediment. The mixture was then shaken, centrifuged and the fluid poured off. If the sediment was too thick, the laking with the acid was continued until the blood cells were lessened in number. A drop of the sediment was placed on a large slide, covered with a good-sized cover slip, and searched with a low-power lens.

The embryos appear as cylindrical, slightly curved little worms with a refractile outline and a characteristic granular internal structure. Both ends are round, but the anterior is a little narrower than the rest of the body and terminates in a clear homogeneous cap. The preparation may be preserved for several weeks by rimming the cover slip with vaseline or cement.

The writer was not successful in finding the embryos in stained specimens of the sediment. Herrick and Janeway had a similar experience. but Staübli had no difficulty in obtaining them. None of the parasites were found in the stools.

The earliest time at which the embryos were found was on the sixth day after onset, and the latest twenty-two days after the beginning of the disease. Staübli concluded, from his experiments on guinea-pigs, that the birth of the embryos begins, at te earliest, six or seven days after infection, and that the maximum migration in the blood lies between the eighth and twenty-fifth days after eating the infected meat. He was unable to find embryos in the heart blood of guinea-pigs later than the twenty-seventh day after infection. The first embryos reach the muscle on about the ninth or tenth day after infection, and after a period of from two to three weeks there is still a fair chance of recovering them from the blood.

Lamb considers the technique of the test very simple and thinks this a valuable means of diagnosis in cases suggesting trichiniasis, although this method is not infrequently unsuccessful. It is most valuable in those cases in which the patient refuses permission to excise a piece of muscle or where the muscle findings are negative.

Endemic Malta Fever in Texas.

The Journal of the American Medical Association, in each of its September numbers, gives an article on this subject by Gentry and Ferenbaugh, Lieutenants, Medical Corps of the U. S. Army. In June, 1911, Ferenbaugh observed in Del Rio, Texas, five cases of continued fever which gave the agglutination test with the specific serum of malta fever, and they were reported by him as that disease. The writers were then ordered to Texas with a field laboratory to determine the identity and extent of this fever. They located at Langtry because the cases reported had been infected near that place. Two of these cases returned to them with relapses, which afforded an opportunity for laboratory and clinical study. Cultures were made from the blood of these patients and gave an abundance of the micrococcus melitensis. Agglutination tests gave identical and positive results, agglutination taking place readily with the specific serum at a dilution of 1-1000 in one hour.

Other cases of this disease were found in the vicinity of Langtry and it seemed probable that the disease had a much wider distribution. The cases cited gave a history of either drinking goat's milk or of being in the goat-raising industry. This fact led the writers to study continued fevers in the principal goat-raising sections of the State so as to determine whether the cases diagnosed as atypical cases of typhoid fever might not be cases of infection with the micrococcus melitensis. Visits were made east and west through the principal goat-raising section of the State embracing an area of about three

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hundred miles along the Rio Grande and extending ninety miles to the north, including the Nueces and lower Pecos counties. Goat-raising has been the most important industry of this region for the past thirty-five years.

By careful inquiries they ascertained that for many years there had existed a continued fever characterized by frequent relapses, pains in the joints and a very low mortality. It has been known as slow fever, continued fever, and occasionally as goat fever. During the summer of 1894 there occurred in the practice of Dr. Robertson, of Rock Springs, about twenty-five cases of continued fever. The disease was confined almost entirely to families that had goat pens surrounding the houses. Other physicians report treating a few cases of this disease each year.

The people of this region have believed for years that the disease was contracted from goats and have spoken of it as "goat fever" or "dust fever." And because the disease is more prevalent in May, June and July, when the prevailing wind is south, some of the goat herders have located their goat pens on the north side of the house to avoid the dust.

Seven additional cases of this fever were studied in this region. A series of agglutination tests were made on 23 female goats of which the serum of 8 agglutinated the micrococcus melitensis completely at a dilution of 1/20. The milk of these goats was centrifugalized and the sediment plated, but no culture was obtained.

In Edwards County there are approximately 175,000 goats, almost all finely bred Angora; 128 goats examined in this region gave a positive agglutination reaction. Only 8 had milk and when plated gave a negative result. The writers concluded that September was a time of the year unfavorable for the isolation of the micrococcus; that the kidding season and when the goats are in full milk is the time when the disease is contracted by the ranchmen; and these spring months would afford the best time for a study of the disease.

Through these investigations the fact has been established that Malta fever exists endemically in the goat-raising sections in Texas. The writers conclude that the micrococcus melitensis must be present in the goats of this section because 20 per cent. of all the goats examined have given a positive agglutination test at 1 in 20 dilution; they are direct descendants of goats imported from countries where the disease exists in goats, and all cases gave a history of association with the goat-raising industry or of drinking goat milk.

It is important that any subscriber who changes his location should at once notify us of the change, giving his old address also, so as not to miss any numbers of the COUNCIL.

Some Practical French Prescriptions.

Furnished by
THOMAS LINN, M.D.,
NICE, FRANCE.

Pleasant disinfectant for rooms:

℞ Camphoræ, 20 grams (5 drams).
Calcii hypochloratis, alcoholis, aa., 50 grams (1½ ounces).
Aquæ, 64 grams (2 ounces).
Olei eucalypti, olei caryophylli, aa., 1 gram (15 grains).
Mix carefully in large *cold* jar.
Sig.: A few drops on a plate in rooms.

Asthma:

℞ Ext. stramonii, 0.10 (1½ grains).
Syr. codeinæ, 90 grams (3 ounces).
Aq. laurocerasi, 30 grams (1 ounce).
M. Sig.: Three tablespoonfuls daily.
Hertz and Sernosi.

Fetid Bronchitis:

℞ Alcohol (50%), 20 grams (5 drams).
Aq. destill., 90 grams (3 ounces).
Ac. carbol., 5 grams (1¼ drams).
Thymolis, 1 gram (15 grains)
M. Sig.: In inhalation.

Flatulence:

℞ Resorcin, 4 grams (1 dram).
Bismuthi subnitratis, 20 grams (5 drams).
Aq. destill., 200 grams (6 ounces).
M. Sig: Tablespoonful half an hour before meals.

Gastralgia:

℞ Stovain, 0.25 Gm. (4 grains).
Aq. laurocerasi, 10 c.c. (2½ drams).
M. Sig.: Twenty drops when in pain.—*Nigon.*

Pruritus:

℞ Mentholis, camphoræ, aa., 10 grams (2½ drams).
Spirits camphoræ,
Chloroformi,
Aetcheris, aa., 30 grams (1 ounce).
Sig.: Spray this on the parts and put on camphor powder.—*Prof. Gaudier.*

Grip:

℞ Antipyrine, 0.50 gram (7½ grains).
Quininæ sulp., 0.15 gram (1½ grains).
Sodii bicarb., 0.30 gram (3 grains).
M. for one wafer.—*Prof. Lemaire.*

Hemophthisis:

℞ Calcii chlorinatæ, 4 grams (1 dram).
Syrupi opii, 30 grams (1 ounce).
Aq. destill., 120 grams (4 ounces).
Sig: Tablespoonful hourly.—*Prof. Debove.*

Piles:

℞ Epenephrin (1 to 1,000).
Petrolati liquidi, aa., 4 grams (1 dram).
Adde,
Adipis lanæ hydrosi,
Petrolati, aa., 12 grams (3 drams).
Olei geranii, 0.120 gram (2 grains).
Sig.: Local use.—*Dr. Mignon*, of Nice.

Sciatica:

℞ Agar-agar, finely cut, 3 parts.
Linseed, ground, 1 part.
Sig.: Use as poultice.—*Prof. Hayem.*

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Original Articles

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Sentences, like sunbeams, burn deepest when most condensed.

The Use of Arsenic in the Treatment of Syphilis.

By HENRY W. CATTELL, A.M., M.D.
PHILADELPHIA.
Editor of *Lippincott's Medical Dictionary.*

THE two great specifics in medicine, quinine in malaria and mercury in syphilis, receive marked therapeutic reinforcement from the employment of arsenic by any one skilled in the use of drugs. The solutions of Donovan (Liquor arseni et hydrargyri iodidi, U. S. P.) for syphilis, and of Fowler (Liquor potassii arsenitis, U. S. P.) for malaria, are to be put down as standbys of the utmost importance in the treatment of these affections, especially in those patients manifesting chronic symptoms.

When the famous John Hunter was about 40 years of age he inoculated himself with syphilis in order to watch its effects upon his own person. In those days syphilis was usually controlled by a course of several months' mercurial treatment, and it is interesting, in the light of our present knowledge as to arsenobenzol (salvarsan), to inquire why this short treatment was then efficacious. Impartial investigation will show that enormous doses of mercury were at that time administered empirically, just as Ehrlich now advises, from his scientific experiments, the employment of large amounts of arsenobenzol in order that there may be as complete a sterilization of the infected one as is consistent with no irreparable damage to the important tissues of the body themselves. But John Hunter, notwithstanding the large doses of mercury which he took, is supposed to have died from the effects of syphilitic lesions. Experimentally, the administration of arsenobenzol may cause an animal infected with the *Treponema pallidum*, the causative agent of syphilis, to become entirely rid of these organisms, and thus in one sense cured, as the animal may again be inoculated with the disease. My first two cases, injected beneath the scapulæ with arsenobenzol in November, 1910, according to the method of Wechselmann,[1] but treated during the past year with mercury as well, now show no acute lesions and give a negative Wassermann test, but I hold forth no hope to these patients that all of the protozoan organisms have been destroyed, for once a syphilitic always a syphilitic is a rule which only in the rarest of instances has ever been shown to be wrong. This holds good now as well as it did before the introduction of arsenobenzol.

Salvarsan, so skillfully exploited by its manufacturers—Ehrlich himself receiving a direct benefit from the sales for the support of his laboratory—is by no means the only arsenical preparation which may be used beneficially in the treatment of syphilis. Leaving aside arsacetin and atoxyl, with which Ehrlich experimented previous to the announcement of the wonderful results obtained by the use of arsenobenzol, but which were shown to have untoward effects upon the eye, we have Dr. John B. Murphy's[2] endorsement of the cacodylate of sodium, in the September 24, 1910, issue of the *Journal of the American Medical Association.*

There are a few important points that should be remembered in preparing the suspension for intramuscular injection or the clear solution for intravenous use. The arsenobenzol should always be freshly prepared, and the color should be some shade of yellow, and never of a distinctly brown or reddish hue. When a suspension is prepared by the druggist or at the office previous to visiting the patient, it may be advantageously placed in ampoules, and when the solution is made for intravenous injection it should be kept, until used, well above the body temperature in a thermos flask arrangement of one sort or another. *The greatest care must be taken to have everything sterile.* It has been shown by the German writers that if the distilled water used be not perfectly made, there will be a rise of temperature due to the injection of foreign matter into the bloodstream when the intravenous route is employed.

The following mode of preparing the suspension is substantially that employed by Wechselmann, of Berlin, and has yielded good results in the hands of the writer. The

[1] See article by the writer in the *International Clinics*, Vol. iv, Twentieth Series, 1910.

[2] An earlier report on the use of this form of arsenic will be found in the article by A. Heym in the *New York Med. Jr.*, October 30, 1909.

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outside of the ampoule containing the drug, preferably 0.5 gramme (7½ grains) for a woman and 0.6 gramme (9 grains) for a male, is thoroughly washed with alcohol. The larger extended end is then filed, and glass dust removed with sterile gauze, and the contents placed in a mortar, to which is then added 13 to 16 drops of a 15 per cent. solution of sodium hydroxide, which amount of alkali is sufficient to bring into solution the above amount of arsenobenzol. Glacial acetic acid is now added until all of the arsenobenzol is reprecipitated, and the whole is rubbed up in the mortar with distilled water until an evenly suspended emulsion is made. This may now be centrifugated, if a centrifuge be at hand, and normal salt solution added to the amount of about 15 cubic centimetres (half an ounce), and the whole made neutral by the addition of either a 1 per cent. acetic acid solution, if the reaction as determined by litmus paper is alkaline, or else with a decinormal solution of sodium hydroxide, if it be acid. The yellowish suspension is then transferred to the ampoule by means of a sterile funnel, the washings with the physiological salt solution added, and the opening sealed by a blow-pipe flame driven directly across the opening so that the glass of the body of the ampoule will become as little heated as possible, the vessel being rotated in the fingers in order to make the closure symmetrical. If it is desired to make the injection in two places, a very good rule to follow, the given dose may be divided into two ampoules. When the mixture is to be immediately employed, it is simply placed into a suitable vessel to which the needle of the hypodermic springe will have easy access. Personally, I much prefer the all-glass syringe to any on the market, and one should be purchased which will hold about 20 cubic centimetres (over half an ounce).

The suspension *may* be introduced directly beneath the scapulæ. In doing this, the needle is inserted beneath the skin for a distance of about 3 inches and is gradually withdrawn as the injection is made. It is preferably given in two places, one above the other, or one on each side. It is now generally considered, however, that the buttocks are to be preferred, the injection to be made deep down in the muscles, as in the case of hypodermics of the insoluble salts of mercury. The outer quadrant is to be chosen, for the reason that this situation does not so markedly interfere with sitting down and with walking, nor is it so near important nervous and venous trunks.

Lesser adds the contents of the ampoule directly to 15 cubic centimetres of hot sterile water, preferably in a stoppered glass cylinder containing a dozen or so of glass beads. After bringing the arsenobenzol into solution by agitation, it is reprecipitated by the addition of 2 cubic centimetres of a 10 per cent. solution of sodium hydroxide, to be again redissolved by the addition, drop by drop, of the same solution. The whole is then brought up to a volume of 20 cubic centimetres, half of which is injected into each buttock. Should an insoluble injection be desired, the contents of the ampoule are rubbed up with 3 to 4 cubic centimetres of paraffin oil or iodipin, and injected, half into the muscles of each buttock. Sinuses may occur from each of these methods; there is often much pain, and if the needle is introduced into a vein, fatal thrombosis may follow the injection.

In order to prepare the solution for injecting into a vein, and this is the method now most usually employed, though when once injected it cannot be removed from the body, as in the case of the intramuscular suspension or solution, 40 to 50 cubic centimetres (about one and a half ounces) are placed in a stoppered glass cylinder, properly graduated to 100 cubic centimetres, to which has been added a dozen or more glass beads. These beads are not necessary, but they very much facilitate the breaking up of the arsenobenzol after it has been added, thus shortening the time of bringing the drug into solution. The contents of the ampoule containing the arsenical preparation is now added, and the vessel, well stoppered, is shaken until a light yellowish solution, which is markedly acid, is produced. This is rendered neutral with a 15 per cent. sodium hydroxide solution, a heavy flocculent precipitate being formed, which is redissolved on agitation. About 20 drops will be required for this purpose. Should the solution not be neutral, it must be made so by the addition of either weak hydrochloric acid or acetic acid, as in the preparation of the suspension. The solution of arsenobenzol is now filtered through Swedish filter paper inside of a funnel which empties into a graduated vacuum-tube burette, which holds three hundred cubic centimetres (about 10 ounces), to which is attached a thermometer. As the temperature falls considerably during the injection, the temperature of the filled tube should be 120° F.

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The greatest variety of apparatus is to be found upon the market at the present time for the giving of the injection. The simplest apparatus consists of rubber tubing, to which is attached a hollow tube in which is a thermometer, and a simple form of needle for injection into the vein. While the vein may be exposed by an incision, it is very much better to acquire the knack of forcing the needle directly into the vein, but in either case it must always be remembered that if any of the arsenobenzol comes in contact with the tissues of the arm outside of the vein considerable pain will result, this pain often equalling in severity the pain from an intramuscular injection. Previous to the introduction of the needle the part may be frozen with carbon dioxide, snow or with ethyl chloride.

Now, to continue with the mode of injection. The tube just described is filled with normal salt solution, and attached to the thermos flask arrangement, containing 300 cubic centimetres of the prepared arsenobenzol solution. The receptacle is raised in the air with one hand, and the needle held in the other hand is lowered, with the object of permitting any bubbles of air to escape, but care must be taken that all of the normal salt solution is not allowed to flow out, as it is very much better to have the first fluid that goes into the vein to be of this character, as this brings only salt solution into direct contact with the outside tissues in case there should be any leakage, and the blood-stream adapts itself somewhat to the after-coming solution. In plunging the needle into the vein, which has been distended by the application of a bandage or tourniquet around the upper arm, care should be taken that it passes through the skin obliquely before entering the vein. The vein of choice is the median cephalic or basilic, and the reader is referred to the article by Dr. Davis in the last issue of the MEDICAL COUNCIL, page 421, for an illustrated article upon this subject. As soon as you are sure that you have the needle well within the vein, the bandage to the arm is removed, the cock of the burette turned on, and the solution of a temperature not exceeding 100° F. allowed to flow slowly into the vein. Twenty minutes is none too long for this purpose.

Should swelling about the vein occur, it will be found that this is due to the irritation incident upon the escape of the fluid into the surrounding tissues. This condition is preceded by pain, and the patient should be asked to inform the operator as soon as any discomfort is felt in the elbow. Extensive induration, phlebitis, or edema of the arm may follow such a mishap. Gravity is best used to force the fluid into the vein. This is done by the nurse or assistant elevating or lowering the burette in which the arsenobenzol is contained, or in supporting it as in giving an enema. If a syringe be used, one is chosen which holds about 20 C.c., and which is provided with a two-way stop-cock, so that either the solution of arsenobenzol in one bottle or the physiological salt solution in another bottle may be introduced at will.

Usually the patient will complain of a slight fullness in the head, the face becoming flushed. Headache may supervene, and the patient become hysterical. I have known vomiting to be a distressing symptom, and should it occur during the injection, it is usually well to stop the giving of any more of the solution. A bright, but passing, erythema of the skin may occur within the first twenty-four hours of the injection. It is remarkable how quickly the spirochetes disappear from the lesions, and the rise in temperature seen in certain cases has been explained by the presence of these killed organisms and their products of distintegration in the body. Ear disturbances especially of the vestibular apparatus, are to be feared several weeks after the injections more than are the ocular affection seen so frequently after the use of atoxyl.

Several persons are reported to have died on the table while the injections were being given: in one case because the solution was too concentrated, in another on account of the possible introduction of a small piece of glass from the ampoule or from one of the beads, and another from overdilatation of the right heart from too rapid introduction of the solution. Hemiplegia has followed in a number of instances. While in Berlin I saw the organs removed post mortem from a patient suffering from locomotor ataxia and general arteriosclerosis, in which a subcutaneous injection had been given.

Before the injection is given, the patient should be prepared as for any other operation, and the danger to him stated as being much less than from an operation for appendicitis between simple attacks when the operation is performed by a skilled surgeon. In no instance should a cure be promised, and it is now usual to give three injections in the course of the treatment, two of which are administered intravenously and the other in the buttocks. Gain in weight is one of the most constant happenings after its use.

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The Stomach-Tube and Its Uses.

By D. W. REED, M.D.,
GREELEY, COLO.

BY MANY physicians the stomach-tube is looked upon as a sort of horror, to be thought of only in cases of acute poisoning and other extreme emergencies, and even then the emetic and the saline cathartic are usually chosen instead.

The writer has made almost daily use of the stomach-tube in his practice for sixteen years with such satisfactory results that he is convinced that many physicians could improve the character of their work by a more general use of it.

First, then, concerning the tube itself. It should be large. The opening in it should be not less than one-half inch in diameter, in order that tenacious mucus and remnants of poorly masticated food may pass through it without clogging the tube. The tube should not be stiff and hard, but the rubber of which it is made should be thin, smooth, and flexible, and it should be made in one piece and *not in three pieces* united by sections of hard rubber tubing. This last requirement is on account of the liability of the tube to clog at the unexpansive hard rubber joints. The tube should have a bulb and funnel, but great care should be exercised in using the bulb lest a patch of mucous membrane be pulled from the lining of the stomach. If the opening in the side of the tube should become clogged while the opening in the end is in contact with the mucous membrane, the vacuum produced by the use of the bulb under these circumstances is very apt to detach a patch of mucous membrane.

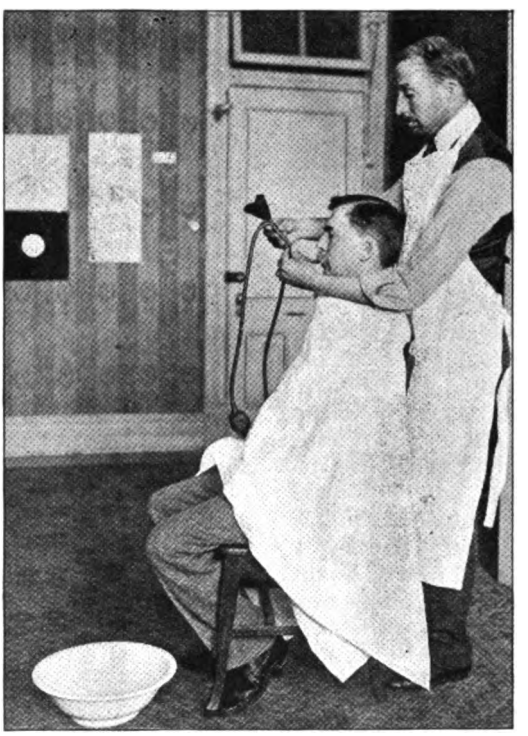

FIG. 1—Passing the tube. The physician stands behind the patient, inserts tube into mouth of patient to back of pharynx. Tells patient to swallow, and while the epiglottis covers up the glottis, the physician quickly passes tube over epiglottis and down into the stomach.

The tube may be used with great advantage to the patient under the following circumstances: In cases of acute poisoning it is indispensable, but it is also exceedingly useful and beneficial in many *ordinary* cases. In chronic gastric catarrh its use is the best treatment that has yet been devised. The tough mucus can not be removed from the stomach by any other means half so satisfactorily. The first pint of water poured into the stomach should have a heaping teaspoonful of bicarbonate of soda dissolved in it, and before allowing the solution to syphon out it should be thoroughly agitated by the hand over the stomach. As the liquid syphons out, you may see the large amount of mucus which has been loosened by the agitation of the soda solution. This gastric lavage should be practiced daily in bad cases; later, once in two days, or once in three days, according to the severity of the case. In my experience this treatment is followed by immediate improvement.

In acute indigestion no other treatment will give such instant relief as a thorough evacuation of the stomach by the stomach-tube.

The social customs of the American people are a menace to public health. Often a banquet is served after three full meals have been eaten. The entire system rebels against this insult, but many people have not the courage to refuse to abuse their stomachs in this way lest they be called "cranks," so they abide by the customs and eat again. History tells us of one of the Roman emperors who had a vomitorium at one end of the table. When he became full, he resorted to this place and emptied his stomach in order that he might repeat the gluttonous indulgence at the table. We

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might imitate the Roman emperor to some extent by the use of the stomach-tube after a banquet—not that we might repeat the indulgence, but that we might not be ill as a result of too much eating.

Many cases of dyspepsia that prove intractable by ordinary methods become easy when we have made a scientific chemical analysis of a test-meal that has been in the stomach one hour. This test-meal should be removed from the stomach by means of the tube, and in this the bulb only should be used, as no liquid should be added to the contents of the stomach to aid in removing it. Right here is the main difference between accurate scientific work and guesswork. A patient comes to the doctor. The doctor gets a history of his troubles, records all the subjective symptoms. Then he wisely (?) writes a prescription for hydrochloric acid and pepsin, tells the patient to get the prescription filled at the drug-store and "take it for one week;" if it helps him, continue its use, but if not, come in again and "I will change your medicine." In other words, "I will guess again." That is exactly what it amounts to without a chemical analysis of a test-meal; but with the chemical analysis the work is accurate and scientific. The stomach-tube is indispensable in getting the test-meal into your beaker.

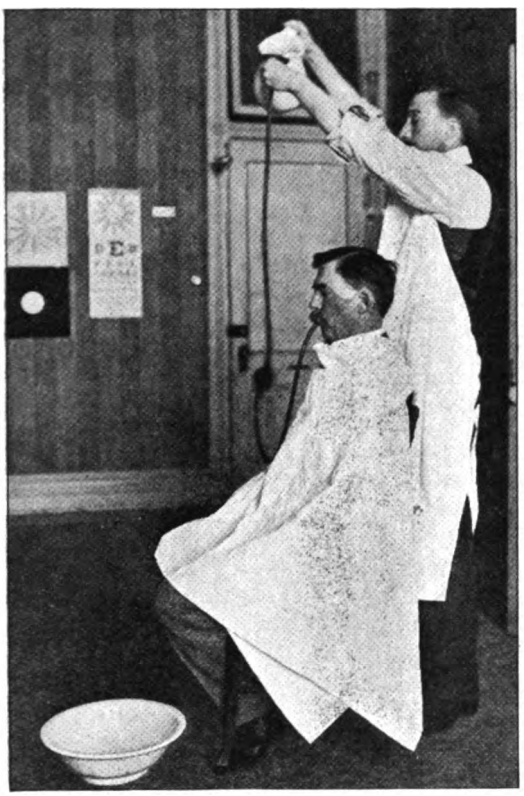

FIG. 2—Pouring solution into stomach. The first pint of warm water should have a heaping teaspoonful of bicarbonate of soda dissolved in it. When a pint of this solution has entered the stomach the physician should thoroughly agitate the stomach with his hand as indicated in Fig. 3.

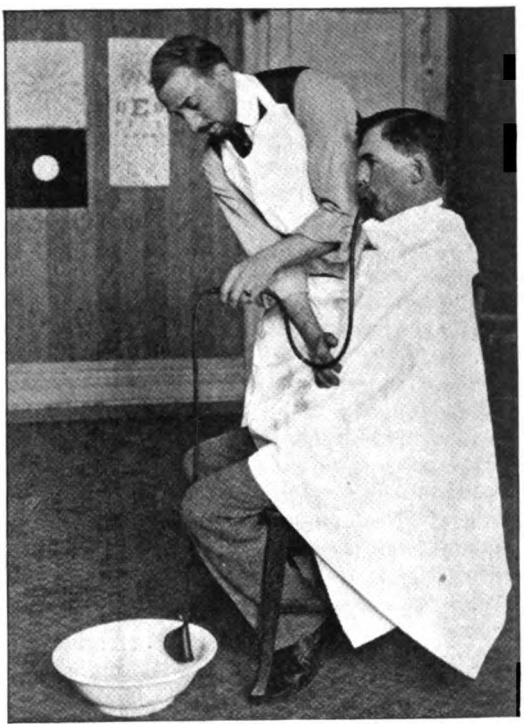

FIG. 3—Allowing the contents of stomach to syphon out into receptacle on the floor. The washing should be continued with warm water and agitation until the water flows out as clean as it enters the stomach.

J. A. Burnett, of Marble City, Okla., distills one ounce of resublimed iodine to 12 ounces of diluted alcohol, to which enough potassium iodide has been added to effect solution. To the product thus obtained add enough glycerin to make one pint. This may be used internally or externally, and when applied to the skin for a sufficient length of time symptoms of iodism may appear. This preparation may be used as an application to the painful joints of rheumatism or gout, and in cases of catarrh it may be employed both on the inside and outside of the nose.—*Physicians' Drug News.*

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A Brief Study of the Immune Sera.

By WALTER RENDTORFF,
U. S. Government Indian Service,
HAYWARD, WIS.

PART IV.

The Leucocyte.

NO MENTION has been made of the rôle of the leucocyte in combating infection and inducing immunity. Our studies were confined to the influence of the serum alone. We considered only the stereochemic possibility of certain serum constituents in their relation to immunity, paying no heed to the vitalistic theory as originally espoused by Metchnikoff. The recent studies of Wright have accentuated the importance of the leucocytes as phagocytic agents in many infections. As is well-known, Metchnikoff's first studies concerned themselves with unicellular amœboid organisms, which he found capable of ingesting and digesting certain foreign particles, among them bacteria. These properties are shared by the leucocyte, and upon this power of phagocytosis the Metchnikoff theory rests.

Phagocytosis.

The function of the leucocyte is held to be nutritive, resorptive, and protective. It is with the latter property that our studies are concerned. Phagocytosis is not confined to the white corpuscles, but the endothelial and amœboid connective-tissue cells may possess this property. Metchnikoff divides these phagocytic cells into macrophages and microphages. The former are made up of the large lymphoid white corpuscles of the blood, connective-tissue cells, and endothelial cells. The latter, or microphages, consist of the polymorphonuclear leucocytes. The macrophages are supposed to be more active factors in protection against certain chronic diseases, such as tuberculosis and leprosy. The microphages, on the other hand, are supposedly more antimicrobic in such acute infections as scarlet fever and erysipelas. As is well known, leucocytes are by virtue of their amœboid properties actively motile cells. Ingestion of foreign substances occurs by a swimming of the protoplasm about the foreign body, enclosing it and thus preparing it for digestion. This intraleucocytic digestion of nutritive or foreign particles, as the case may be, is accomplished by ferments which Metchnikoff calls cystases. The ferment existing in the macrophages is specified as macrocytase, that existing in the microphages as microcytase. Although this cytase is never found free in the blood under normal conditions, it may become so upon partial or complete solution of the phagocytes. This phenomenon of solution is termed phagolysis. The ferments or cytases thus liberated correspond with the complements described by Ehrlich. Metchnikoff also recognizes the presence of an anchor-like substance corresponding to the interbody or amboceptor of Ehrlich. This he terms the fixator, and considers it also an intraleucocytic product like the cytase. This points out one of the differences between the chemic and vitalistic theories of immunity. Ehrlich considers complement and amboceptor as normal constituents of the serum, whereas Metchnikoff denies this, representing his fixator and cytase as normal constituents of the phagocytic cell alone, fixator and cytase being poured into the blood stream only upon phagolysis of the leucocyte. In the study of phagocytosis it is found that chemotaxis plays an important part. This can be demonstrated through the use of certain salt solutions. A strong solution of these salts is found to repel the leucocyte (negative chemotaxis), whereas in a much weaker solution the leucocyte is attracted (positive chemotaxis). In this wise we may reason that when very virile cultures of certain micro-organisms are injected into the system in large quantities the leucocytes are repelled and phagocytosis does not take place—death results. On the other hand, if neither the amount nor the virility of the invading organism is beyond the capacity of the host, then phagocytosis takes place and immunity is established. In regard to those diseases dependent upon the action of a toxin, Metchnikoff believes that the leucocyte has the power of absorbing and destroying the toxin, in fact, of forming antitoxin. Metchnikoff discredits the opinion of Ehrlich that in passive immunity there is a chemical union between toxin and antitoxin. Throughout he holds to the vital properties of the phagocytic cell in contradistinction to the chemical affinities of substances existing in the serum.

In view of the fact that in certain diseases, such as in a streptococcic infection, the serum of the patient possesses no bacteriolytic power, it would appear that im-

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munity depends not upon any properties of the serum but rather upon the phagocytic power of the leucocytes. On the other hand, in some disorders it can be demonstrated that when all the white corpuscles are removed the serum is still capable of destroying bacteria. This is the case with typhoid and cholera. Thus it may be readily seen how controversy may arise as to which factors are of prime importance in the production of immunity. Putting matters briefly, we are at present obliged to look to both the stereochemic theory (Ehrlich) and the vitalistic theory (Metchnikoff) for explanations of all the phenomena met with.

Opsonins.

But quite recently Wright demonstrated the importance of certain serum constituents in the phenomena of phagocytosis. These constituents he calls opsonins. These opsonins have the power of rendering the bacteria susceptible to the action of the phagocytes, and it can be demonstrated that in their absence phagocytosis does not occur. Proof that such substances exist was made somewhat like this: When the fresh defibrinated blood of an animal was mixed with a bacterial culture and the mixture placed in a thermostat for some thirty minutes at proper temperature, it was found upon making stained preparation that the polymorphonuclear leucocytes held large numbers of bacteria. If, however, the serum was first washed away from the corpuscles contained in the defibrinated blood, no bacteria were taken up by the leucocytes. It is therefore evident that the serum is essential to the ingestion of bacteria. Now the question arose whether these opsonins are or are not the same antibodies that Ehrlich has described. Hektoen concluded that they are not, that they are different from other antibodies. Immune body and complement may, however, play some part in opsonic action. In order to demonstrate the opsonic power of a given blood, a comparison between its bacterial absorbing power and the bacterial absorbing power of a normal blood is made. This constitutes the opsonic index that we read about in our journals. I cannot enter into a detailed description of the methods used in the comparison, but will briefly outline the same. It is evident that three factors enter into the performance of the test, namely, leucocytes, bacteria, and serum. These are mixed in the proper proportions, incubated for about fifteen minutes, and smeared upon a slide. The slide is then stained and examined under the microscope, using an oil-immersion lens. The number of bacteria absorbed by successive leucocytes is now ascertained and an average made. The ratio of the average number of bacteria taken up by the leucocyte to the average number taken up by the leucocyte of a normal blood constitutes the opsonic index.

Opsonic Index.

It is found that in certain acute diseases, such as erysipelas for example, the opsonic index is lowest when the clinical symptoms are at their height, and that the index increases as the symptoms subside. The same holds when an injection of one of the Wright vaccines is made for therapeutic purposes. It is found that the opsonic index falls soon after the injection and then quite rapidly rises. The condition as met with during the fall constitutes what is called the negative phase, while that marked by the rise is termed the positive phase. There is then a relation between rise in the opsonic index and recovery, although this rise is by no means a good measure of the patient's immunity. That is to say, we cannot measure the degree of immunity by the opsonic index alone, but must take into consideration the clinical symptoms and the complex phenomena discussed in previous chapters of this series. The same holds true of the precipitins and bacteriolysins, neither of which can be considered as positive indices of the degree of immunity present. In the practical application of the opsonins so-called vaccines are made use of. These are prepared by making use of material taken from the patient himself or from material developed in the laboratory, the so-called stock cultures. These bacterial vaccines represent dead cultures of bacteria in which the bacteria are present in accurately measured quantities. In the preparation the living cultures are exposed to a temperature of about 60 degrees Centigrade for twenty minutes and a .5 per cent. solution of carbolic acid then added. Treatment by injection of these vaccines aims at a gradual immunization of the body. Opsonins, as already said, prepare bacteria for the phagocytic action of the leucocyte.

In closing this brief series of papers I wish to express the hope that the practician will read up on these subjects. Although

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we find as yet a limited therapeutic application of the different immune sera, bacterial vaccines, etc., the time is ripe for rapid development along these lines. The man who does not, at this time, grasp the fundaments of this science will find himself in an almost hopeless ignorance in the years to come, when our knowledge will have expanded beyond the grasp of him who has not kept up with fundamental principles. In order to secure a working knowledge of the subject I would advise the student to begin with an abbreviated work, such as Dr. Bolduan's work entitled "Immune Sera," this to be followed by a more complex work, such as Rickett and Dick on "Infection, Immunity, and Serum Therapy."

Some Throat Cases—Tonsillitis, Pharyngitis, Adenoids, etc.

By E. L. PAULDING, M.D.,
ARROYO GRANDE, CAL.

PROFESSOR F. FORCHEIMER in the good old days used to classify the throat infections into seven kinds. Nowadays, according to the pathologists, there are over a dozen kinds of tonsillitis. As I have not yet met even all of the seven kinds of old, I will not try to enter into the pathology, but merely tell about some things, diagnosis, treatment, etc., that I do know.

Recently a Methodist minister met me with a cordial hand-shake, saying, "You ought to advertise your treatment of sore throat, for the world ought to know of it." This is my advertisement. He had struggled for years with recurring attacks of sore throat, with dry ministerial vocal cords, and a chronic cough. He had experienced freedom from all his throat troubles, cough, ministerial voice, etc., for over a year, and felt well and happy over it. We will come to my treatment of his case later.

Diphtheria.

Don't let the child infected with diphtheria escape careful examination till too late because it makes a howl and a struggle when you try to see what is going on inside. Your serums will work well early in the case, but fail if you put their use off for a few hours.

My chief point in diagnosis is the palatal arch. No matter if you cannot see a membrane of the size of a pin's head, and your microscope fails to show you the diphtheria bacillus, look at the arch. If it is dark red and swollen you have a case of diphtheria. The acute follicular tonsillitis and the false diphtheria do not show this sign. Of course if membranes are in sight you are surer, that is if they have a tendency to invade the arch. Get in your serum.

The Peroxide Spray.

I was called to Pizmo Beach recently—"that new non-paralleled pleasure resort (four miles from Arroyo Grande) that has not its equal in the world, with its fifteen miles of driving beach, a hundred yards wide and as level as a floor and as hard as an asphaltum pavement, and a climate far ahead of the famous Riviera of Italy, for it is 65 degrees summer and winter—never too hot, never too cold." (I am only quoting an advertisement, but it is mostly true.) The patient had had a case of diphtheria six months before. The doctor had cured him with the hydrogen dioxide spray. The sore throat continued and he had continued the treatment. The peroxide kept taking off the new epithelium as fast as formed, and the rawness persisted. I gave him:

℞ Tr. guaiaci, f3j;
Glycerinæ, f3ii.
M. S.—Take f3j, every three or four hours.

I also had him pack his throat with the cold towel pack. He got well in a day or two. How often the peroxide is used too long, not only on throats, but in palmar and other abscesses, ulcers, etc.! If you need to use it after the first few days, my advice is to use it only once a week or so.

The Cold Towel Pack.

Recently I was called to see another sore throat case. We have them occasionally, in spite of our wonderful climate. It was in a young married woman from Oakland, Cal. They told me that another doctor had treated her unsuccessfully for a week, and they wanted a change. (He told me afterward that he had sent out one bottle of throat medicine on the diagnosis of the father and had never seen the case.) Well, I went—reluctantly, for I knew the family of old. I found her in bed with the greatest sweat-bag of cloths around her throat I ever saw. They were evidently trying the Bier hyperæmic treatment on her; whether recommended by her previous doctor or not, I don't know, but I do know that a half-warm poultice or pack will invite the blood to a part about as well as a Bier

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suction apparatus and keep up inflammation maybe better. I took off that pile of cloths and looked into her throat. I found a simple catarrhal tonsillitis with somewhat enlarged tonsils, showing that the acute tonsillitis was grafted upon a chronic tonsillitis. I gave her the tr. guaiac and a gargle between of the white bitterless hydrastis in water. The guaiac is rather hot for some people, for I often make it even stronger, f℥ii to f℥ii of glycerine. The glycerine is the only thing that will cut it, except alcohol. Then I gave her the cold pack. Wet six inches of the end of a light towel in ice-cold water, apply wet end across throat folded to a four-inch width. Put the dry part around the neck and *once* over wet part, spreading towel a little over wet. Pin with a safety pin. Change (with new towel) every half-hour, three times. By the third application the throat will be cool enough to stay cool and healing all night. This cool compress is the best thing for a beginning cough that I know.

Inhale some menthol heated in a cocoa-can on the stove to 105°, in a little water, or over a lamp, testing the strength of the vapor occasionally, rather than the thermometer. Then take a little protonuclein, say 14 to 16 tablets for an adult, and you will break up even the grippe, or a bad cold, in its incipiency. Breathe in the menthol with the mouth and chin down in the can, and breathe out through the nose. The vapors from hand-warming menthol inhalers don't go in strong enough to do much good, but with this method relief is experienced right away.

Ministerial Sore Throat.

Now as to that minister I began with. He had chronic follicular tonsillitis (not all ministers have this kind). There was an oozing of pus from the follicles, and swelling and pain. I strongly suspected tuberculosis back of it, though my microscope or my methods failed to reveal tubercle bacillus. I simply injected three or four minims of equal parts of tincture of iodine and carbolic acid into one tonsil, following this up with a similar injection into the other tonsil three or four days later. (The alcohol in the tincture takes off the caustic properties of the carbolic acid, and favors its spread into the tissue injected.) The one injection into each tonsil was all he got and it was sufficient. I warn you against using more, as I once got into trouble by injecting a syringeful into a hydrocele sac. I injected after emptying the sac of serum and the solution would not pump back into the syringe. It cured the hydrocele, but almost took my patient. It cured me also of some of my rashness.

Adenoids.

It is well to prepare your tonsils by the above injection before operating for adenoids, for if the tonsils are not removed, or treated as above, the adenoids often recur. This treatment is a very good one for enlarged chronic catarrhal, follicular, tubercular, or rheumatic tonsils, or to head off a quinsy. I have not had much experience in preparing throats for the adenoid operation, but what I have tried worked all right. It is much easier and better than a removal of the tonsil, for you have your tonsil left to secrete some mucus with which to lubricate each bolus of food swallowed, and your patient will arise and call you blessed for that gift.

Since I have removed or successfully treated the tonsils by injection I have never had a recurrence. I am the only physician in this large county (nearly as big as Connecticut) who operates upon adenoids, and get quite a lot of cases. I don't use any of the new-fangled slider and snipper kind of adenoidtomes. A friend of mine cut off the uvula close up, while showing me what he could do with the new kind. I prefer a Gottstein, or Goldstein, or a Kirstein, or a Stubbs, or a Beckman, to any others.

A Diagnostic Wrinkle on Convulsibility of the New-Born.

By DOUGLAS H. STEWART, M.D.,
NEW YORK CITY.

SHOULD a new-born child have convulsions at any time during its first week of infancy, the fontanelles feeling full or tense to the examining finger and the eyes showing a spasmodic, convergent squint early in the paroxysm, then the cause of the nervous explosion is intracranial hemorrhage.

If the fontanelles are not tense or bulging, but, on the contrary, are level or depressed, then the mother is (or has been) a hard, though possibly "silent," drinker, not of light wines or beer, but of whisky or brandy, gin, cologne, essence of Jamaica ginger, or spirits of camphor—which substances are mentioned in about their order of use. My sole exception was a mother who confessed to two and a half grains of

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morphine every day. "And nobody knew anything about it." I have not found the effects of morphine so bad on the offspring as I have those of alcohol. Both are best avoided, of course. When "cocktails" could be obtained without exciting any adverse comment, they were preferred to the usual tipple because they seemed to "hit the exact spot." As to the intoxication of the father when the child was begot, that seems only a factor if the mother was in fear or terror at his condition. When both were drunk, my observations seem to point to greater maternal effect and lead me to think that an alcoholic mother is more likely to bequeath a state of "convulsibility," and consequent early convulsions, to her child than is the father, though possibly his influence exerts its mastery at a later period in the infant's life. However this may be, convulsions in a new-born child, with lax fontenelles, may lead the physician to a surprising diagnosis in the most respected and hitherto unsuspected quarters. If so, he should protect the woman, as with ordinary tact he may straighten her ways; although the child will usually not live, yet with a careful handling of the circumstances a mother may be protected and reformed, thus the sacrifice may not be wholly in vain. The man who talks openly to the husband or family about the matter may expect to be shown the door, if nothing worse happens to him. His reward will probably be the not very consoling thought that he has stupidly lost all chance of remedying the evil and at the same time has made bitter enemies of a whole family in which he might have acquired the mother for a lifelong friend. As O'Reilly put it: "Be silent and safe. Silence never betrays."

Pellagra.

By Dr. ADELAIDE W. PECKHAM,
Professor of Bacteriology in the Woman's Medical College,
PHILADELPHIA.

Two recent numbers of the *Journal-Record of Medicine* contain interesting articles upon pellagra, and state a new theory regarding its cause. Mizell, in the August number, gives very convincing data to the effect that pellagra is caused by the consumption of cottonseed oil products. Linolin, a neutral fat, forms a large percentage of cottonseed oil and is present in all semi-drying oils. When used as a food it accumulates unchanged in the tissues of the body, and on undergoing oxidation produces poisonous substances which cause the symptoms of intoxication seen in pellagra. As long as linolin remains in the body the disease may develop at any time that the reserve fat is called upon and broken up. The greatest injury falls upon the secretory apparatus of the digestive system: upon the inorganic agents first, the hydrochloric acid is suppressed; and later upon the organic agents, the rennin and pepsin are not secreted.

A strong, vigorous person may eat these oils for years and show little deleterious effect. The disease then takes a chronic course. If there is a tendency to accumulate fat there is danger of an acute form of the disease whenever a slight illness occurs.

The writer concludes from statistics that there are 50,000 cases of pellagra in the South, and that they became relatively numerous in 1908. He has seen 200 cases and all have used cottonseed oil as a food. In those cases in which cottonseed oil was excluded from the diet there has not been one recurrence of the disease, while all those that continued its use continued to have pellagra.

The principal sources for cottonseed oil in foods are: compound lard, salad oils, cooking oils, beef fat, and butter. These products may contain enough of the oil to be of serious damage to human beings.

Mizell quotes statistics to show that the increase of pellagra in the United States parallels the increase in the consumption of cottonseed oil. Animal fats have always been very popular in America and up to a certain period there was little demand for vegetable oils. But this preference has been gradually overcome and their use has steadily increased. This is probably due to a great extent to the improved methods for refining oils, making them more agreeable as foods. The domestic consumption of seed oils in 1860 is given as less than 9,000,000 gallons, while in 1903 the annual amount manufactured was 170,000,000 gallons, three-fourths of which probably enters into home consumption. The value of cottonseed meal as a stock food is discussed in one of the U. S. Government bulletins. It is used extensively both in this country and abroad. In Great Britain the cottonseed mills are run more for the meal than for oil. The average per cent. of oil in cottonseed meal is 13.45. The injurious effects of cottonseed products upon farm stock have been attributed to material

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that has undergone fermentation. The fresh product can be safely fed to beef cattle, milch cows and sheep, if care is taken that it is used with less concentrated foods. The meal, although easily digested, is in part deposited in the animal as cottonseed oil. Butter from milch cows fed on cottonseed responds to the test for cottonseed oil, showing that a part of the oil is eliminated. This probably protects the cow from injury. Its use as a food for pigs and calves and other young animals is attended with great danger, as they often die from its effects. In fattening beef cattle, the usual period is too short for the injurious effects to be noticeable. Exercise is limited and oxidation is thereby reduced.

In the second article, published in the September number, pellagra is discussed with regard to oil-consuming nations. The writer states that all nations that eat semi-drying oils have pellagra. The disease is found in countries where not enough maize is raised for home consumption. The principal semi-drying oils are obtained from cotton, sesame, maize, pirrot, kapok, Brazil nut, Luffa, rape, pumpkin, sunflower and poppy. Some of these oils contain a much smaller quantity of linolin, the harmful agent, than others and so can be eaten in larger amounts without causing injury.

From a table giving the geographical distribution of the disease, pellagra is seen to be endemic and the cases are relatively numerous in the following countries:

In Northern and Central Italy the disease is prevalent. The Italians are noted oil consumers. Large amounts of semi-drying oils are consumed by the poor, and they are used for adulterating olive oil.

The northern country of Roumania, Mouldavia, is the only part where pellagra is found. The special agent states that 2,500 barrels of cottonseed oil are consumed in Mouldavia annually. A great abundance of corn is raised in Roumania both for home consumption and for export; but pellagra is not found in the southern country, Wallachia.

In Austra-Hungary pellagra is prevalent in the Tyrol. Cottonseed oil products were practically barred from this country in 1906. The deficit was made up by importing other semi-drying oils and olive oil. In 1908 about 25,000 quintals of corn oil and 10,000 quintals of sunflower oil were imported. Pumpkin seed oil is a domestic product. In 1905 three per cent. of the population of the Tyrol had pellagra.

In Northern Spain so much olive oil is exported that the natives eat imported semi-drying oils. The people of Lower Egypt and the Red Sea Coast are large oil consumers and all except the wealthy substitute cottonseed oil for olive oil. Pellagra is of recent date, well within the period of the introduction of cottonseed oil. In 1907, there were seven cottonseed oil mills in operation in Egypt. Sesame and poppy oils are indigenous.

In Southwestern France, the history of cottonseed oil and pellagra are as convincing as in the United States. Marseilles is the vegetable oil center of the world. The semi-drying oils were exported from Marseilles long before they were carried from America. The first mill for crushing oil seed was active in 1817, and now 465,000 tons of the seed are crushed annually. About 40,000,000 kilograms of poppy seed are crushed annually, and in 1903 123,239,000 kilograms of sesame seed were imported. Cases of pellagra, which were at one time abundant, are now relatively few. The decrease in number began about the time that the landed estates were divided and the condition of the peasantry improved. The non-drying oils are now eaten mostly in France.

Russia, another pellagra country, uses a great deal of cottonseed oil as food; also sunflower and pumpkin seed oil. Pumpkin seeds from a particular variety are eaten in large quantities in Russia.

In the United States pellagra cases are relatively numerous in all of the Southern States except Maryland and in Tennessee and Illinois. There are a few cases in Pennsylvania, Maryland, Kansas, Arkansas, Oklahoma, Kentucky, and California. It has increased rapidly within the past four or five years, notwithstanding the fact that a general warning has been given regarding the eating of corn.

Statistics show that three years ago only 10 per cent. of the people of the South ate cottonseed oil; now the number has increased to 50 per cent. In 1897 the number of gallons used was 37,923,118; in 1907 the number had increased to 133,844,536.

When Bismarck was ill he was extremely reticent, and the physician attending him was so annoyed by his inability to obtain proper replies to the medical questions directed to the great man concerning his illness that he finally turned to him and told him he had better call in a veterinarian—Dickinson in *Archives of Diagnosis*, July, 1911.

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Polyserositis.

By J. J. ZAUN, M.D.,
ST. PAUL, MINN.

I wish to report an interesting case of polyserositis (chronic inflammation of the various serous membranes of the body at one and the same time), appending a few general considerations on the diagnosis of this condition:

Mrs. X., aged fifty-five years; has had six children; two miscarriages; pregnancies complicated (retained placenta, chills, fever). May, 1906, had pericarditis with effusion. January, 1907, pleurisy, without effusion, followed by jaundice; since then complains of pains over liver on deep inspiration, and shortness of breath; liver was enlarged, but not tender on pressure. During winter of 1908-1909 had been treated for heart weakness; friction rubs over liver and spleen; spleen palpable. March, 1910, fulness in abdomen, "bloating;" no fluid in abdominal cavity. Two weeks later, fluid in abdominal cavity. While lying on back umbilical region shows tympany extending to ensiform; flanks and suprapubic region flat; border of flatness changes with change of position. Liver dulness extends from lower border of sixth rib to midway between umbilicus and ensiform cartilage. Liver palpable, hard, irregular surface, edge blunt, enlargement of left lobe. Lungs show nothing abnormal Heart normal, except for weakened sounds and slight pulmonary accentuation. Urine normal. June 4, 1910, liver dulness two finger-breadths below costal arch; dulness persists in flanks. September 22, 1910, liver edge one and a half inches below costal arch, edge blunt, not tender to pressure; pain over liver on deep inspiration; no fluid in abdominal cavity; friction rub over liver. October 14, 1911, liver not palpable below costal arch; left lobe can be felt about one and a half inches below ensiform cartilage. Several times in the last year has had ascites of a few weeks' duration. Urine never shows albumen.

We may have more or less complete adhesions of the layers of the pericardium as a result of pericarditis. This condition is sometimes observed during the course of a pericarditis; frequently, however, at autopsies, we meet with adhesions of the pericardium where no history of an acute pericarditis is obtainable. In some cases extensive adhesions may develop and remain without symptoms, "in other cases the obliteration of the pericardial sac causes special physical signs and severe sequelæ." One of the most important of the physical signs is the systolic retraction caused by adhesions of the pericardium with the heart and also with the chest-wall. This symptom must, however, be viewed with considerable reserve in making a diagnosis, as we sometimes find retraction (systolic) without co-existing extra-pericardial adhesions, and there may be no retraction of the precordia during systole in cases of undoubted obliterating pericarditis.

"The absence of a normal cardiac impulse" is of diagnostic value when cardiac dulness has increased with normal heart sounds, when the adjacent borders of the lung do not move with respiration because of adhesions due to associated pleurisy, and when the course of the case and the general history are confirmatory.

The general constitutional symptoms of obliteration of the pericardial sac are subject to great variation. In many cases there are no symptoms at all, while in other cases there may be evidence of circulatory disturbance. This is sometimes due to mechanical embarrassment of the heart, but more often to changes in the myocardium. There is atrophy, fatty infiltration, and fatty degeneration, with consequent dilatation; the pulse becomes small and frequent and the usual picture of broken compensation, the pulse becomes small and frequent nosis is difficult.

Sometimes when there is obliteration of the pericardial sac a condition is developed much resembling hepatic cirrhosis. There are increasing dyspnea and great ascites, with subsequent edema of the lower extremities. There may be a serous effusion demonstrable in one or both pleural cavities. At autopsy, however, we do not find the hepatic cirrhosis which had been supposed to exist, but instead a total obliteration of the pericardial sac, often associated with "nutmeg" liver, chronic peritonitis, and plurisy.

The peritonitis causes marked fibrous thickening of the peritoneum, especially marked on the surface of the liver (Zuckerguss leber, frosted liver). We may have a similar group of symptoms not associated with inflammation of the peritoneum, as circulatory disturbances resulting from obliteration of the pericardial sac affect chiefly the portal circulation. A combination of obliteration of the pericardium with liver cirrhosis has also been observed. In cases of this kind the diagnosis cannot be made correctly unless one is acquainted with the symptom-complex and pays especial attention to the cardiac signs, *i. e.*, increase in area of dulness, absence of apex beat, or presence of systolic retraction.

There may be a tubercular pericarditis, a disease important clinically, since in many cases it is apparently primary. A diagnosis of this condition is probable, if there is a "phthisical habit," hereditary predisposition, and co-existing diseases of other

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serous membranes, especially pleurisy or, in rare cases, "chronic peritonitis." Care must be taken to avoid confusion with myocarditis or mitral stenosis.

In tubercular affections of the peritoneum we may distinguish three classes of cases. The most frequent form shows adherence of the peritoneum to the abdominal wall, often of such a grade that the omentum and loops of gut adhere to and cannot be separated from it. In the abdomen numerous adhesions occur, the spaces between them being filled with serous, serofibrinous, fibrinohemorrhagic or pus exudation. Occasionally, when ulcers have perforated, we find the spaces filled with fecal masses and pus. From any of these areas fecal fistulas may form. The adhesions are always especially prominent between the liver and the diaphragm. The hardened omentum sometimes resembles a sausage-shaped tumor, and the mesentery may be so shortened that loops of bowel, through kinking and adhesions, may become almost occluded.

In the second class of cases ascites usually predominates. The fluid is cloudy or bloody. Adhesions occur in only a few places or may be absent. Sometimes the entire peritoneum is dotted with gray-white or yellow tubercles, usually thickest in the region of the diaphragm. In old cases the tubercles become indistinct and may be lost in the granulation tissue. The serous surface may be covered by a thick layer of tissue, varying from fibrinous to soft and cheesy. It may lead to retraction of the omentum and mesentery, as in the fibrinoplastic peritonitis of the cirrhoses. The adherent loops of the small intestine may be covered by thick adhesions resembling a hide, and may have the appearance of a nodular island.

In the third class of cases, ascites may be entirely absent. Sometimes in peritoneal tuberculosis one may find a liver cirrhosis, usually corresponding to Lanner's form. Rarely one encounters the hypertrophic form, in which the liver may be enormously enlarged. We may find in these cases tubercle bacilli, tubercles, and sometimes large cheesy nodules, which, however, is rare.

Determination of Sex in Embryo.

EDITOR MEDICAL COUNCIL:

John J. Mullowney, Peking, China, asks for data which will help him to ascertain whether the left ovary produces female and the right ovary produces male offspring; and whether gravitation determines to which side the spermatozoa go.

On September 16, 1904, I operated on Mrs. W. for an ovarian tumor. The right ovary was entirely removed. In August, 1905, she gave birth to twins—a boy and a girl.

W. G. DRINKWATER, M.D.
Gormania, W. Va.

EDITOR MEDICAL COUNCIL:

A great deal may be said and will be said on the determination of sex, and the possible discovery of some system that will pull the wool over the eyes of nature and allow man to procure sex at will. The following may be of interest to those who have made a study of the question: Place a young, gay rooster over a flock of middle-aged hens and all the eggs hatched will beget roosters. On the other hand, a staid, middle-aged rooster placed in a flock of frisky pullets will be the father of pullets only. The more vigorous animal will beget its own sex, following the law of the survival of the fittest. During a practice of seventeen years, in which time I attended a large number of confinements, I have formed the opinion, from observation, that the parent possessing the greatest vitality begets its own sex.

E. T. MILLIGAN, M.D.
687 Jefferson Ave., Detroit, Mich.

Pneumonitis.*

By ROBERT L. HAMMOND, M.D.,
WOODSBORO, MARYLAND.

Pneumonitis†, as its nomenclature signifies, is an inflammation of the lungs. In a descriptive sense it is an acute sthenic or asthenic fever, attended by an exudate, croupous or catarrhal in character, into the vesicles, bronchioles and parenchyma of the lungs, with a natural tendency to terminate in a distinct crisis.

The subtitles under which its pathology and treatment are studied are croupous pneumonitis, named from the character of its exudate; and catarrhal bronchopneumonitis, named from the constituent of its exudate, and the way in which it invades the lung tissue.

Croupous pneumonitis invades with its exudate the air-cells of a lobe or lobes. It

*This manuscript was sent simultaneously to the COUNCIL and to a medical journal in the west. We did not know of that fact until we had it in type. We now publish the article, since it contains ideas that should be given publicity.—EDITOR.

†The term "pnuemonitis" is employed, by the writer, rather than pneumonia, because it more definitely implies the presence also of localized inflammatory action.

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is common to all ages and comprises about seven-tenths of all the forms reported.

Catarrhal bronchopneumonitis invades first the bronchioles, then the vesicles and interstitial tissue of both lungs with its catarrhal or muco-purulent exudate; it is mostly confined to children and embraces about three-tenths of all the cases reported.

The great mortality attending this disease at present makes its study one of the most important within the realm of medicine. Its causes are multiple; next to taking cold, a predisposition to it is the most frequent.

It is a peculiarity of this disease that at the time of a normal crisis the temperature is liable to become subnormal, and this condition may occur and a state of collapse may supervene even when positive antipyretic measures have been omitted altogether.

The above unfortunate circumstance was common in countries where quinine was used in unreasonable doses, and the cold bath was improvidently employed.† It was common everywhere when the coal tar derivatives were used in positive doses.

Medicinal Agents.

The treatment here outlined is conservative; it is simply a peaceful invasion of the domain of nature, a clasping of the outstretched hands and a mutual declaration of dependence in times of dire affliction.

The preliminary purgation is best accomplished by a single dose of 10 to 30 grains of calomel triturated with 1 grain of sodium salicylate. Its action should be assisted in 4 hours with a 3-pint clyster of warm salt water, from 1 to 3 teaspoonfuls of chloride of sodium to each pint should be used, according to the amount of intestinal stimulation required. Lavage of the colon, with the foregoing solution, should be practiced once daily during the continuance of the case, unless specifically contraindicated.

The salt supplies that chemical to the system, which an analysis of the urine indicates is lacking, and the water supplies the system with that element without burdening the stomach with it. It will soothe the stomach and intestinal irritation, lower the temperature, and materially modify the progress of the disease.

If the stomach is irritable, give ice and apply a mustard plaster to the epigastrium. If chill is present, use heating agents internally and externally, that the blood may be brought back to the surface as quickly as possible; when reaction occurs, with augmentation of fever, commence at once with ice water and fanning, ice water to the entire head and back of neck, and fan the thoroughly moistened or douched parts vigorously and constantly (avoid the ears), wet the hands and wrists, get the water between the fingers, and then lay outside of the cover to cool; if fever is excessive, wet the feet also.

The room should be large and kept at about 70° F. It should be ventilated by admitting air from an adjoining room to which pure fresh air is daily admitted; at the time of the crisis or during the application of the heating agents the temperature of the room should be not less than 80° or 85°. If the outdoor temperature is favorable, open the windows.

The fresh air advocates declare it to be a specific in this disease. If this be true, why the alarming death rate? And why are the number of cases increasing instead of diminishing?

The writer employed cold air in the treatment of scarlatina twenty-eight years ago. It relieved, as it will, any form of dyspnea. The scarlet hue of the eruption soon paled, the dyspnea diminished and the temperature was kept within bounds. He thought that he had discovered a specific, but soon found that more trouble from sequelæ resulted than he had had to contend with in the primary disease. The patients became subject to various forms of kidney trouble, had waxy kidney, evidenced by the peculiar waxlike color of the skin; and parenchymatous degeneration, with uremic convulsions. A low grade of secondary fever, with gastric and intestinal disturbances, often complicated and retarded convalescence. Again catarrhal bronchopneumonitis, as a terminal affection, developed with its train of neurasthenia. All these troubles were found to be due to the patients taking cold from exposure at the *critical time of the defervescence of the fever,* which occurred about the fourth or fifth day. His experience with fresh air in scarlet fever, therefore, has kept him from repeating the experiment in pneumonitis.

The cause of the present increased prevalence and death rate in this disease is largely due to the intemperate and *inconsistent* practice of sweltering in overheated and crowded day apartments, workshops, theatres, churches, and the violent change from these to rooms with wide-open windows at night as sleeping apartments; the

†See Ziemssen's Cyclopædia of Medicine, Vol. V., Fol. 165-166.

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exposure attending fashionable attire; the degeneration produced by luxurious living; the scientific proclamations heard at times that colds and pneumonitis are caused only by germs; and that the indulgence in alcoholic liquors is conducive to health and longevity. The preaching and practicing of these doctrines have a demoralizing effect upon the habits of the careless and indigent, causing them to neglect even the ordinary precautions against taking cold, and to become prodigal of those things which contribute towards constructing and maintaining a vigorous organism. (The writer begs that the reader will allow the foregoing etiological digression.)

Several years ago I was called to see a patient dying with pneumonitis on a cold rainy day in April. He was lying with his bare breast exposed to the depressing, aggravating, cold, damp air, which was admitted through the open windows (the air was not sufficiently cold to effect a material reduction of the temperature, and his face was alternately congested blood red and mottled), *he was begging for more air.* I gave him a hypodermic of morphine and atropine, wet his parched brow with ice water, covered his chest, and commenced fanning him. He was at once relieved, and said: "If this had been done sooner, I might have recovered. You can put the windows down now, Mamma will take cold." She did take cold and has suffered with bronchitis ever since.

The fanning has a more decided effect in lowering the temperature than the ice cap. The philosophy of it is that the water is more quickly evaporated, and the *heat,* as fast as it comes to the surface, *is rapidly radiated and carried away,* while the ice simply substitutes its cold for that of the heat in the circumscribed area with which it is in contact. Its effects, however, are too rapid for the purpose of reducing the throracic and abdominal temperature, and the local effect of the ice cap to the precordium is preferable for that purpose.

The marked relief obtained by this method of abstracting heat is apparent, not only in the tranquilizing effect of it, but the pulse diminishes in frequency and increases in tone and fulness, and continues thus as long as it is practiced, and from a prognostic standpoint the case at once is taken well in hand, and the chances for recovery are brightened. More good can be accomplished by the proper, constant, vigorous use of the "fan" than if all the "fresh air" of the firmament is allowed to course the patient's bed-chamber uncontrolled and undirected.

Pneumonitis, when uncomplicated, is a short-lived disease, running its course and ending in recovery—crisis—in from one to five days. We, therefore, need not fear the highest temperature, we can promptly control it, but we must stop or restrain the inflammatory process, whether the temperature be low or high, by a conjoined, systematic, constitutional internal and external antiphlogistic treatment.

Diet.

The diet is of supreme importance (predigested foods of the highest degree of excellence should alone be given until convalescence is established), one or two tablespoonfuls of liquid peptonoids of beef, milk and gluten, should be given, regularly, with cracked ice, and sugar if desired, every two hours, or an equivalent quantity of meat juice. A glass of iced lemonade made from good ripe fruit, is very refreshing and may be taken three times daily, or in lieu of it the expressed juice of a good ripe orange, sweetened if desired and well iced, can be used. Milk should be positively avoided, unless the above forms of nourishment cannot be obtained; if compelled to use it, the quality should be first class, fresh from the clean udder of a healthy cow, and free from acidity, three or four ounces, with the addition of one or two tablespoonfuls of sterilized limewater, may be given every two hours.

Cracked ice should be consumed very freely, and, if sufficient water for the needs of the system is supplied in this form, nausea will be prevented, and nourishment will be consumed in sufficient quantity to meet the necessities of the case at critical times.

Very large doses of medicine should be avoided, particularly those having a depressing effect, as their sudden withdrawal, which is imperative at the time of the crisis, is apt to be followed by a recrudescence of the fever.

Sodium salicylate in five- or ten-grain doses, combined with acetanilide, one or two grains, is a safe and valuable antiseptic, antipyretic, analgesic, and calmative agent; its potency is much enhanced by the combination as represented in the following formula, No. 1, which is designated thus to facilitate reference to it.

℞ Sodii salicylas, pure, gr. v.
Acetanilide, pure, gr. i.
Quininæ sulph., pure, gr. ss vel gr. i.
Tinct. digitalis, pure, U.S.P. 1890, ♏. ii.
Tinct. aconit. rad., pure, U.S.P. 1890, ♏. ¼.

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Hydrarg. chlor. mit., pure, gr. 1-20.
Ipecacuanhæ fld. ext., pure, gr. 1-20.
Strychniæ sulph., pure, gr. 1-200.
Mentholi, pure, gr. 1-50.
Methylis salicylas, pure, gr. 1-50.
Moschi (Chinese), pure, gr. 1-200.
M. ft. C. T. No. 1. Signa. One or two every two hours dissolved in a teaspoonful of sterilized water, with cracked ice, and sugar if desired; these doses rarely need to be increased or diminished.

Severe cases should take two of these tablets every 2 hours; those of milder type need only take one and a half.

In all cases, as soon as the crisis occurs, the dose should be reduced, or intervals lengthened, and when the crisis is known to be firmly established, all medicines, cold drinks, and cold applications should be abandoned and hot drinks and broths should be substituted for them, and continued throughout convalescence.

The *great majority of cases, if seen early, will come to a crisis during the stage of congestion, i. e.,* within twenty-four hours after prodromal symptoms have manifested themselves, *and no exudate will have occurred.*

Ice-Cap.

But if the case is malignant, or fully developed, one in which the exudate is occurring, or has occurred, then it will be necessary to supplement the measures already employed by applying a large well-filled ice-cap to the precordium and lower portion of the thorax.

Now, the temperature must be taken every hour or half-hour from the bowel, provided the patient cannot be trusted to hold the thermometer in the mouth. (Inspect the parts and anoint the opening before inserting the instrument.)

Never omit, at this stage of the case, to give morphine, gr. ⅛, and atropine, gr. 1/200, combined with strychnia, gr. 1/40 to 1/30. This will prevent any liability to shock, which the application of the ice might occasion, and it will also quiet the dyspnœa, pain, cough, restlessness, and nausea; it should be repeated as often as found necessary, between hours for formula No. 1.

As soon as the temperature begins to fall, and when the temperature has reached 98.3°—96° Fahr., remove the ice. Watch the temperature, and if it attempts to rise above the normal, reapply the ice.

Cantharidal Blister.

If, after several hours, the temperature refuses to fall again to the normal, remove the ice, rub the surface upon which the ice rested well with turpentine, and apply a large, strong cantharidal blister to the precordium and lower portion of the thorax, cover it and the entire chest with a well-made linseed meal poultice, as hot as can be borne; let it be on 10 or 12 hours. The poultice will materially help to bring on the crisis and establish resolution. After removing the blister clip the vesicles and reapply a well-oiled poultice, changing it every third hour for twenty-four hours, then do away with the poultice and apply a very heavy coat of antiseptic oxide zinc ointment once daily. The blister will promptly impel the advent of the crisis, and the ointment will rapidly heal the blistered surface.

Subnormal Temperature.

If subnormal temperature should occur, and it is not attended by any bad symptoms, nothing special need be done to restore the temperature to the normal; simply stop all medicines and cold applications and ice internally; give hot beef broth, free from fat, warm beef juice, hot coffee or tea, or hot milk with lime-water.

Collapse.

But if collapse follows, in addition to the above internal heating agents, local, hot applications must, at once, be begun, combined with the very best stimulants which we possess, several ounces of hot whisky or brandy toddy, served with nutmeg, should be given; or atropine, gr. 1/200—1/100 alone or combined with strychnine sulphate, gr. 1/30; or camphor, gr. ½—one dissolved in sterilized olive oil; or trinitrine, gr. 1/100—1/50; the last four should preferably be given hypodermically; or comp. spts. ether, 31; fld. ext. valerian, ½3, may be given. Either of these stimulants should be used to meet the exigencies of the case in hand. The patient should be rubbed dry with warm flannel cloths as often as sweating occurs; this will materially help to revive the fagging powers.

Moist Cases.

If the case is a moist one, *i. e.,* attended by profuse universal sweating, often fanning the patient will be sufficient to restrain the temperature, together with the application of hot or cold water to the extremities; ice to the precordium should be omitted in such cases, unless the surface subsequently should become hot and dry.

In all moist cases, while the entire surface is bathed in perspiration, reliance

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should be placed in blisters to establish the crisis.

Asthenic and Adynamic Conditions.

These types or conditions make up the majority of the fatal cases. With them the temperature is low and fluctuating, often not more than 97°—98°—100°, or but a trifle above these figures.

A careful study of this disease reveals its neurotic nature; add to this individual idiosyncrasies, and we have a complicated condition to study and treat.

Those who have their attention fixed upon high temperature alone, and neglect the danger signals of the low, will never be very successful in the treatment of this disease.

Signs and symptoms are often unreliable indicators of the intensity of the morbid process going on in the system or lungs in this affection.

A very small patch of croupous pneumonitis or a limited area of catarrhal bronchopneumonitis will often exhibit urgent symptoms; on the other hand, an extensive portion of lung tissue may be involved and attended by a general lethargy of the symptoms, which effectually masks the gravity of the case, even in those of robust constitution.

Again, the nervous individual will complain, and justly too, of intense suffering at the very onset, because of the severity of the congestion and inflammation raging within, until universal toxæmia or a gangrenous condition lulls the system into partial insensibility, then the temperature, respiration and even the pulse may beguile us into a sense of false security (in this condition or in cases of profound shock), while the devastation within goes on apace and before we are aroused to the true pathological status of the case it is beyond recall.

But why is it that a low temperature is harder to manage and reduce than a high one? Space will not admit of a complete answer to this question, but an explanation sufficient for the purpose of making clear the reason why special efforts are instituted for the relief of this particular condition will be found in the fact that the entire organism is nearer death, and when the somatic death process is near at hand or begun, some of the most powerful poisons and chemicals will often fail to hasten death or produce their usual effects; then blisters will fail to draw, emetics to vomit, ice to chill, heat to restore the temperature, and even the blood to flow from fresh-made wounds.

Sthenic cases may, from neglect or bad attention or errors, become asthenic, and it is this latter class of cases which are increasing the death rate so alarmingly.

We look upon a patient and wonder why, despite the presence of a low temperature, slight acceleration of breathing, with a weak pulse but not a palpitating heart, with slight nausea and an occasional effort to vomit, with a hippocratic countenance, listless eyes, weariness and tossing of the head and limbs, he should refuse all medicines, attention, and nourishment, and die in a condition of profound shock; but such are the conditions and results which confront us at the bedside.

In such an extremity, no matter what the temperature may be, remove all clothing from the patient, place him or her between warmed rubber sheeting, place hot-water bags under the cover to raise the temperature, and apply flannel cloths wrung out of hot water to the entire surface.

Do not, under any circumstances, allow the patient to rise or throw off the cover, make all these applications under the cover, and before commencing these applications give hypodermically morphine, gr. ⅛; atropine, gr. 1/200; strychnine, gr. 1/30. This will, in time, bring the patient out of the condition of shock. When pulse has revived and general symptoms have improved, continue busy, remove the wet packs and hot-water bags, place patient between hot blankets, rub the entire surface gently but thoroughly with dry flannel cloths until perfectly dry and a firm reaction has occurred.

The Ice-Cap in Asthenic Conditions.

Now, if the case, after reviving, does not continue to improve and a general exacerbation of the symptoms should occur, an ice-cap should be applied to the precordium until a reaction occurs in the form of a more or less pronounced crisis, use the thermometer frequently to note the effect of the treatment, and use the same general precautions which have been advised in the management of sthenic cases.

The Cantharidal Blister in Asthenic Conditions.

If, after the temperature has reached the normal, it should threaten to rise and the general condition indicates that a true crisis has not occurred, after the ice has been removed apply a large, strong cantharidal blister, moisten its surface and the entire

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surface upon the precordium and lower portion of the thorax, to which it is to be applied, with turpentine, apply over it and the chest a linseed-meal poultice, bandage the whole securely to its position, and within ten or twelve hours the crisis will be firmly established. Treat the blistered surface as recommended in the management of sthenic cases.

If the patient firmly objects to the use of the ice, the blister can be applied first without waiting to bring about a reaction with the ice. The use of both the ice and the blister should always be preceded by a dose of morphine and atropine and strychnia, and continued, if for no other reason, to prevent the possible shock of the application of the ice or the irritation produced by the blister.

It has been said that "There is evidence to show that fever within moderate bounds may be an effort on the part of the organism to protect itself from infecting germs," and "If the temperature does not exceed 102.5°—103°, antipyretic measures need not be instituted." These same authors appear to have no system or method in their antipyretic treatment. The fallacy of a haphazard application of either medicine, ice or blisters for the relief of hyperexia only is apparent.

We again assert that the temperature alone does not kill, that it is often a misleading symptoms, but it is the pathological process or the peculiarities of the individual constitution, or both combined, which carries the patient off.

The thermometer should be employed to note the effect of the treatment.

The medical and local antipyretic agents should be carefully and methodically applied with the definite object in view of neither depressing the constitution nor the temperature beyond that which is essential to reestablish the normal functions and impel a permanent crisis.

No physician or nurse can do this without painstaking labor. The patient alone should, if possible, be resting and sleeping while this work is going on.

Sufficient morphine and atropine, combined with enough strychnine to help stimulate the heart, in addition to that which formula No. 1 contains (the amounts required will be about one-thirtieth of a grain), should be given to secure the above desired rest.

Again it should be emphasized that the proper food in the proper quantity and quality, as well as drugs, fanning, cold water, ice, and blisters, are indispensable for the comfort and safety of the patient, and they should be used as the skillful horseman uses the proper food, reins and lash, and hopples to control, guide, and get the very best energy and action out of the steed he is developing, and that he supplements the intelligent use of the reins and hopples (alternate hot and cold applications) with the lash (the biting but never-failing stimulant, when used at the proper time, in the proper strength, the old-fashioned rod of correction, the cantharidal blister), when he wishes to make certain the result of a close and doubtful finish.

Addenda.

Children—The foregoing treatment is equally applicable to children of all ages; but very young infants (those under 6 months old) should be gently fanned, at first at least, until they become accustomed to the current; either hot or cold water, as found expedient, may be applied to their extremities. Warm applications in the form of hot wet packs or linseed-meal poultices, with a teaspoonful of good sticky mustard thoroughly incorporated, until redness of the surface is produced, may be applied, and changed every third hour, to the precordium and thorax, in lieu of the ice, especially in very cold weather.

But if the case does not improve within four or five days an ice-cap, not too heavy, should be applied cautiously, and followed with a blister when necessary.

Children stand relatively much larger doses of medicine, particularly calomel, quinine, and salicylate phenol, than adults; they are easily overdosed with morphine, atropine, acetanilide, strychnine, and salicylate soda.

The dose of formula No. 1 for children should be based upon the maximum adult dose.

The following formula, No. 2, may be substituted for formula No. 1 if a change at any time may be deemed necessary:

℞ Phenol salicylate, pure, gr. vi.
Quininæ sulph., pure, gr. i.
Acetanilide, pure, gr. i.
Hydrarg. chlor. mit., pure, gr. 1-10 vel gr. 1-20.
Ipecacuanhæ pulv., pure, gr. 1-20.
M. ft. Pulv. N. I. Signa.—As a dose for a child of 10 to 12 years, every two hours, in aromatic elixir licorice, with ice and glycerine, making in all a teaspoonful. Other children in proportion to age.

Adults should be given double the above quantity, the amount of calomel and ipecac should remain the same.

Morphine, atropine, strychnine and dig-

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italin can be given with this formula if necessary.

For pain, restlessness, insomnia, delirium, dyspnea, anasarca and violent cough, give morphine and atropine, combined with strychnine.

For circulatory weakness, give digitalin and strychnine.

For subnormal temperature, see treatment.

For collapse, see treatment.

For convulsions, if threatened, give an occasional dose of bromide.

For eclampsia, give chloroform by inhalation. If patient can swallow, give a single large dose of calomel, gr. 10-30. If convulsions recur, give to an adult chloral hydrate, gr. 30, by enema and repeat inhalation of chloroform. If tympanites is present, use copious salt-water enema and follow with formula recommended for tympanites.

For coma, give a dose or two of atropine and apply blisters to the inside of ankles or nape of neck, or both.

For vomiting, give ice internally, and apply it, or a blister, locally to the precordium—if other remedies fail to relieve. Confine patient strictly to predigested food. Withhold water until vomiting ceases.

For tympanites, give quinine sulph., gr. 10; glycerine, 13; aqua fervida, 8℥. M. ft. enem. Signa.—As an enema night and morning as far removed from salt water irrigation as possible. Half of this can be used for a child 6 to 12 years old.

For retention of urine, catheterize with a well-oiled instrument, to which a long rubber tube is attached. Children of either sex and age can be easily catheterized, but it is seldom necessary. If retention is prolonged over twenty-four hours catheterization should be performed at once.

Inspect the parts of either sex; let females lie across the bed on the side with limbs drawn up—avoid unnecessary exposure.

Never allow an ill case to strain at urinating. The writer has seen the crisis completely annihilated and the patient die from this cause; intense pain attacked the chest, liver, pancreas, and spleen, relapse of the temperature immediately occurred and it could not be again reduced.

To cause an effusion from pleuritis rapidly to become absorbed, apply a thick, close-fitting flannel jacket or bandage, as a sweater, around the entire chest and abdomen; let it remain on for several months—in cold, damp weather longer. If marked dyspnea develops calls in a competent surgeon.

Summer cases. If the disease should occur in summer and the outdoor temperature is high, place the patient between rubber sheets and envelop the entire chest and abdomen in a four-double muslin or linen sheet, thoroughly wet with water, the temperature of which should be 60° Fahr. This wet pack should be renewed every half-hour at least, until the crisis arrives, by reimmersing it in the water, or by douching it, while on the patient, with the water. Use the same caution in its employment as is necessary while making the ice applications, and fan gently while it is applied.

For convalescence. Return to upright position, and solid food should, in all cases, be very gradual (particularly so in the weak and aged). They should, on no account, be allowed at any time to raise themselves by their own efforts. Allow plenty of nourishing and easily-digested food and hot drinks, coffee, etc.

The use of feeding-mug, bed-chamber, and urinal should be firmly insisted upon, and patient will soon appreciate their value.

Bed robe. A loose-fitting garment, with buttons the entire length in front, should be the only clothes worn until the crisis has arrived and convalescence is established. The usefulness of such a robe is apparent.

Vaccine Therapy.

By T. H. LINE, M.D.,
MARQUETTE, NEB.

It occurred to me, in looking over the many medical journals that come to my table, that the subject of vaccine therapy is given very scant attention by most of them. Many important things in connection with bacterial therapeutics have been brought to light by investigators who have been working in the realm of bacteriology, but we find the rank and file of the profession to be almost, if not entirely, ignorant of this new, but in many cases, superior method of treating communicable diseases. We are all, to a certain extent, familiar with the rule that one attack of a certain communicable disease makes the victim immune to a second attack of the same disease, as, for instance, measles. The physician who is not familiar with the immunizing power of antidiphtheric serum, is certainly a back number. An antitoxin is formed that aids nature in her process

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of immunization. The science of bacteriology has been coming to the front quite fast during the last few years, and is bringing to light many diseases unknown to us before. It has corrected our conception of the causes of many diseases, so that now there are very few diseases that we cannot trace to bacterial infection. Bacteriology is not complicating the practice of medicine, as some would have us think, but it has so simplified matters that where once we had many causes, clinically, we now have only a few. We find a number of diseases like bronchitis, iritis, endocarditis, cystitis, appendicitis, erysipelas, septicæmia, and numerous others caused by the streptococcus. These diseases may differ widely as to their clinical relationship, but to the bacteriologist they are identical.

What has been said in regard to the streptococcus, can also be said of the staphylococcus, pneumococcus, gonococcus, colon bacillus, tubercule bacillus, and the many other kinds of organisms that produce a pathological condition in the human body. Many of these organisms live in the body all the time, where they await, like the buzzard, the coming of the carrion, when they begin a process of destruction. They may be present only in one form, but more frequently we find several species present. When for some good reason the bodily resistance falls below par, they reproduce their kind very rapidly, and destruction becomes more and more rapid, according to the rapidity of reproduction. If more than one kind of organism is taking part in the destruction, we call the result a mixed infection. It is in this class of infection, whether it is due to one organism or a number of kinds, that the vaccine treatment gets in its curative effect. In the ordinary every-day practice of medicine mixed infections are very common, and anything that will destroy the organisms causing the infection should need no argument to show that it should be used in general practice. One great advantage to be derived from the use of this form of therapy is that it is easily administered The hypodermic needle has terrors for some people, but usually when they find it does not hurt them much and that they get better from its use they prefer this method to taking nauseous concoctions. When we use this method we are sure that our patient gets exactly what we intend him to have. Then, again, inoculations are required only at moderate intervals. No one will appreciate this form of treatment, in cases where it is applicable, more than will the nurse or mother in treating infants and children. It is a difficult matter to give some children medicine by the mouth. A few doses of vaccine will accomplish much more, and the bother of drugging the sick child every hour or two, or oftener sometimes, can be dispensed with. To illustrate: Several months ago a child of 10 years was brought to me, suffering with a severe bronchitis, bordering closely on the confines of pneumonia (as I thought), resulting from an attack of measles she had had some three months prior to this visit. The parents of the child some years previous had been through a siege of diphtheria, and knew of the value of diphtheria antitoxin, so that it was not hard for me to convince them of the efficacy of the vaccine treatment. I gave the child a hypodermic injection of a mixed vaccine consisting of streptococcus pyogenes, 30,000,000, pneumococcus, 40,000,000, and staphylococcus pyogenes aureus, 150,000,000. The dose was one-half the above adult dose. The patient was requested to return in three or four days if no better, or if only partially cured. I did not hear from the patient for five or six weeks, when I met her father upon the street and, upon inquiry as to her condition, he informed me that she quit coughing before he got home and had not coughed any more up to that time. He also informed me that her appetite had come back, and that she was gaining strength daily. Should we not study a remedy that will produce such marvelous results? This was not a mild case, but one in which the lungs were full of rales, with loss of appetite, night sweats, loss of strength, and had it not been checked would have eventually resulted in tuberculosis, perhaps.

Some investigators in the field of tubercular infection have made the statement that in some localities 95 per cent. of the newly born infants have tuberculosis, as indicated by the presence of the tubercular germ. In the same locality, at the age of 15 years, they found the tubercle present in only about 45 per cent., while at maturity the percentage of self-induced cures was still greater. When it is remembered that the inactive tubercle is enclosed in a fibrous capsule, and that so long as the fibrous capsule remains intact there cannot be any reproduction of this tubercle, we can read-

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ily see why these infants when brought up to puberty under proper conditions can acquire an immunity to this form of infection. But let their environments be such that they must breathe into their lungs and take into their stomach substances loaded with millions upon millions of streptococci, staphylococci, pneumococci and the like, and the story is entirely different. The tubercle bacillus is a slow-growing germ if left to itself, but a streptococcus comes along and destroys the capsule or house it lives in, and in which it is held a prisoner, liberates the bacillus, and starts it on its rounds of destruction. Then its kind are reproduced rapidly and we have as a consequence the change from incipient to advanced or far-advanced tuberculosis. Had this streptococcus infection been cut short at once by a few doses of streptococcus vaccine, such a case would never have resulted in tuberculosis in the majority of cases. We would give this vaccine to prevent the destruction of this fibrous capsule, and give nature a chance to smother out the smoldering fire inside the capsule that needs only this kind of a match to bring the hectic flush to the cheek. It may be nature is too weak to do this, in which case we call upon our tubercular vaccine or serum to assist, and if the assistance is timely we can expect an absolute cure. There are probably more deaths from tuberculosis, due to a mixed infection, than anything else. Had the bodies of these persons been made immune to the mixed infection there is no doubt but many of those who have gone to their graves by the tubercular route would never have died from that affection. The antibodies would have destroyed and made the body immune to tubercular infection. There is no one who has not some of these germs hanging around in their mouths and throats, and some of them are normal in a limited quantity, and only need a little encouragement to become rebellious. It is not our intention to dip into this subject very deep, but simply to call the attention of the readers of the MEDICAL COUNCIL to this form of treatment which I believe is destined to do much good for those who use it. I verily believe that tuberculosis can be prevented if attention is paid to the mixed infections that accompany it. I believe that many of the open-air cases of tuberculosis owe their lives to the correction of the mixed infections aside from the tubercular infection. By removing these organisms which prey upon the vital reserve of the body, we prevent the lessening of the vital force resistance, and in this way enables us to throw off the tubercular infection or so modify it that it will do us no harm if we live right.

Mention has been made of only a few of the vaccines; nothing has been said of those intended to prevent gonorrhœa, typhoid fever, erysipelas, etc. This form of treatment is coming to the front, and if we care anything for the future it will be well for us to take time by the forelock and post up upon vaccine therapy. The majority of us do not want to be lagging behind when it comes to the dealing out of the good things, so I will conclude with the advise to study up upon this subject.

Diagnosis of Duodenal Ulcer.

By DR. SAMUEL FLORSHEIM,
NEW YORK.

THE diagnosis of this clinical entity has been made possible only by modern methods of examination, i. e., history taking, physical examination, laboratory tests, and the X-ray. There is almost always a history of long-standing attacks of disturbances of digestion with intermittent pains of more or less severity. The peculiar characteristics of these pains are, that they occur two or more hours after a meal, relief for a short time being afforded upon the ingestion of additional food, only to recur again, until the stomach has emptied itself completely.

The pain may follow the meals for weeks at a time, then completely disappear without any medication or special means, returning when least expected, always following the meal two hours or more. The pain is usually described as burning or boring in character, and felt at or about the region of the epigastrium, leaning more to the right side.

Vomiting is seldom complained of, but nausea is a frequent accompanying symptom. Anorexia is prominent in some cases, though many have good appetites and only refrain from eating fearing the two-hour pain thereafter. Loss of weight is complained of by some. Headaches are not frequently alluded to, except in the neurotics. In the latter cases the neurotic symptoms are considerably increased by the existence of the ulcerations, and much care must, therefore, be exercised that the intensified symptoms of the neurosis be not

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hurriedly relegated to the previous neurotic condition and overlooking the extra exciting pathological state—duodenal ulcer. The existence of ulcers of definite pathological lesions in the know neurotic is quite often the stumbling block in the diagnosis of the true condition. The movements of the bowels are not materially influenced in duodenal ulcer, some patients being constipated, while others have normal evacuations.

The physical examination elicits an extremely tender point two inches above the umbilicus on the right side, on a line drawn between the umbilicus and the cartilage of the ninth rib. At times a reflex tender point may be found on the root of the ninth intercostal nerve two inches from the spine.

A gastric test-meal, owing to the chronic state of this ailment, may show a high, free HCl and a high total acidity with much incorporated gastric mucus, simulating closely a true acid gastritis. This test may also show the presence of blood, which may have regurgitated from the duodenum into the stomach.

The feces of a properly prepared patient, i. e., three days without the ingestion of meats, milk, rice, potatoes or prunes,* as these articles of diet give a reaction for blood in the benzidine test solution. When repeated positive tests for occult blood is obtained from a proper specimen of feces, and when high internal hemorrhoids, rectal ulceration and anal fissures can be excluded, the evidence with the foregoing history and physical examination is strong evidence in substantiating a diagnosis of duodenal ulcer.

X-ray examinations and radiography have not been crowned with much success in the effort of locating a duodenal ulcer.

Duodenal ulcer must be differentiated from cholecystitis, cholelithiasis, cholangitis, impacted gall stones in the common bile duct, acute hepatitis, pylorospasm, pyloric ulcer, acute inflammation of the head of the pancreas, pyelitis of the right kidney, and incomplete acute obstruction of the hepatic flexure transverse colon.

The diagnosis of duodenal ulcer is only made possible by the taking of a very careful and painstaking history, a particularly searching physical examination and a thorough laboratory analysis which is carefully studied and properly weighed by a competent up-to-date gastro-enterologist.

808 Lexington Ave.

*Paper to appear in the *Jr. of Gastro-Enterol.*

Saw Palmetto.

EDITOR MEDICAL COUNCIL:

Many cases of inflammation of the prostate gland, acute and chronic, also of bladder that seek relief, will fail to receive satisfactory results by the usual routine treatment. Often a physician is puzzled to know what to prescribe next.

In these cases I have used the saw palmetto preparations, combined with oil of sandalwood, though sometimes the saw palmetto alone has been employed. But it's necessary to obtain a reliable preparation of saw palmetto, and I prefer the oil to the fluid extract, as it readily combines with the oil of sandal wood and olive oil. Any physician can fill his capsules, as this is the best manner of administering the drug, with a drop tube, using a No. 0 or 00 capsule. The capsules are filled about two-thirds full. Slightly moisten the upper surface of lower (larger) section, then place on top, allow to stand awhile till the parts connect. Do not spill the oil over the outside of the lower section or you will have leakage. I mention this as a guide to those who supply their own medicines to patients.

The main trouble with saw palmetto preparations has been that many manufacturers employ inexperienced hands to gather the berries and obtain many that are either imperfect in growth, decayed or mouldy. None but carefully selected berries should be used. Dr. J. Marion Dixon, of Jacksonville, Fla., has called my attention to this matter, and I obtained some of the pure oil from him.

My experience with the oil of saw palmetto has been such as to advise physicians to look into this remedy. We have hundreds of drugs, but so few that we can depend on in the hour of need. Once, old Professor Gross, of Jefferson Medical College, said to the students: "Gentlemen, you had better have ten good reliable remedies that you *know* will carry you over in the hours of suffering, than to have hundreds whose value only lies in theory."

In the country districts physicians do not have all the appliances to work with like in or near the larger cities, and the doctor must select such remedies as will give relief, and thus endeavor to procure a curative action by his limited means of doing so. The buchu, uva ursi, and pareira brava have failed when my combination gives good results.

ELIAS WILDMAN, M.D.

Haddon Heights, N. J.

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The Business Side

OF MEDICAL PRACTICE

While we, as physicians, desire to be scientific students and practitioners of medicine, yet we desire also, for the welfare of our dependent ones and for the sake of our standing in the community, to secure a fair compensation for the services we render to our fellowmen.

Collect Your Accounts Now.

Doctor, even if you have been careless all the year about your collections, you simply cannot afford to be so now. At this season of the year most of your patrons have money if they ever have it.

The merchants and others are now active after their accounts and you should be right along with them—if not a few days ahead—to get what belongs to you.

Also, it is a pretty sure fact that a few days after January 1 many of your patrons will have spent all their surplus money, and no difference how badly they may want to pay you they will find it difficult or impossible to do so.

Now, Doctor, start right in to-day.

Dispensing—Again.

By A. D. HARD, M.D.,
MARSHALL, MINN.

I will not now speak of the many advantages which accrue to the country physician who dispenses his own medicines, but more particularly to the advantages resulting from correctly doing the work.

I am not much surprised when I hear some physicians condemn dispensing and advise others to send the work of this nature to the village drug store, for I have seen quite a number of instances where a dispensing physician filled his own prescriptions from the jumble of dust-covered bottles and boxes on the floor of the "lean-to" back of his office. You will agree with me when I say that a well-devised system of methodically doing work is more satisfactory in any line of human activity than the shifting drift of carelessness.

Dispensing medicines for relief of the sick is an art; not a very complicated one, but one that requires exactness, skill, method and proper facilities. The education of a physician trains him in exactness, the skill required may be easily acquired, and facilities which lead to method and system have recently been placed upon the market at a reasonable price.

While attending the annual meeting of the State Medical Society last October, in St. Paul, I had an opportunity to examine a dispensing cabinet for physicians which leaves little to be desired.

Sixteen shelves, each four feet long, placed on a cleverly arranged moving apron, were made to move at will either up or down in front of the physician sitting at the dispensing desk, by an easily actuated pedal device underneath the desk. They were balanced so that they moved very easily, and successively were brought close to the eye and hand. A plate glass dispensing board, several drawers on each side, and card index conveniences were provided. This dispensing desk occupied no more room than the ordinary office rolltop desk, and was just as elegant as a piece of office furniture. The shelf room was as great as that used by the ordinary drug store as a prescription case.

With this dispensing cabinet, and the elegant pharmaceutical preparations now put out by the leading houses in that line, a physician may easily meet all requirements of his practice more perfectly than can be done by the average drug shop.

The active principles of crude drugs in granule form, the special elixirs put up in three-ounce vials with blank labels already attached, the accurately divided dispensing tablets in easily soluble form, the tablet triturates, ointments in collapsible tubes, endless variety of new process pills so easy to crush or disintegrate, standardized liquid preparations that may be added so conveniently to pleasant elixirs, the ruby and white empty capsules to contain powders or combinations of granules or tablets, and many other favorite preparations which the exacting physician can seldom secure on a prescription from the ordinary pharmacy, may be easily and neatly dispensed from this cabinet. The shelves may be arranged systematically, and index marks on each bottle or container can be made to refer to the card index close by, which gives collected items of knowledge concerning that preparation culled from magazines and personal experiences.

Each prescription filled under these conditions forms a cumulative addition to useful knowledge, very valuable in future work.

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When the medicines for the patient are ready to deliver, the prescriptions and data concerning them are placed on an index card and filed for future use should the patient return.

When prescribing again for the same case the index card is a source of valuable information to guide the direction of treatment, and this information remains as an asset in the physician's practice, which serves to retain valuable patronage.

The privacy of all matters concerning the patient's malady and the remedies which he is using forms a personal attachment favoring permanency and efficient control of the case, to the advantage of the physician as well as the patient, for the fickle changing from one doctor to another often serves to prevent proper consideration of the nature of the malady by any one of them.

When the physician is too busy to attend to dispensing he may very advantageously employ a lady pharmacy clerk to attend to the office and do his dispensing. By thus combining duties it becomes practical to pay good wages to an assistant, of great value in the physician's work.

System in ordering goods requires that a want book be carefully kept, and changing from a satisfactory preparation to one of unknown value should be avoided. The formation of "ruts" is not to be despised. When you have found a good thing, stick to it. In medicine a multiplicity of remedies advised for the same condition indicates that none are very satisfactory. One of them used with an extra amount of discriminating care will usually be productive of best results.

Other things being equal, the physician who can administer the most agreeable medicines will have a great advantage.

Beautiful labels, gilt-edged pill boxes, neat wrapping, and elegance of details, often make the difference between success and failure in the drug business, and they should be regarded by the dispensing doctor. The importunities of the traveling salesman who asks you to try every new idea which his house puts forth should be met with firmness and caution. Most of these wonderful specialties are entirely theoretical and of doubtful value. The number of drugs and chemicals actually required to do complete service of the highest efficiency need not exceed one hundred. The quality of the remedies used by a dispensing physician should be of much greater importance than money saved by buying cheaply. In this respect his dispensing case should show a decided difference from the drug shop as usually found.

Contract Practice and Advertising.

EDITOR MEDICAL COUNCIL:

I want to say a few words—not exactly in reply to Dr. F. J. Madden, and yet something of an answer. I am not a contract physician, but live in a manufacturing and railway center, and we have the lodges which furnish medical attendance to the member and his family. The lodge physicians are paid $2.00 for each member in good standing, and not, as might be inferred from the doctor's letters $2.00 per family treated. Chronic diseases, obstetric cases and surgery are excepted, and medicines are charged for extra. Just what the rate per visit is I am unable to say, but one of our leading men said, a short time ago, that he only collected 60 per cent. of his business; so I think the lodge man will, with his "cheap system," compare with the leading man in private practice.

What is contract practice? Doctors never turn down an appointment as railroad surgeon. It is more than probable that some of the men who helped Dr. Madden to pass the resolutions are holders of annuals from some corporation. Indeed, the Doctor whose indignation is so high may belong to a society himself that has for members contract men. A considerable proportion of the members of most State societies ride to the annual meetings on passes issued to them as contract surgeons. Wherein is the difference? Does the evil lie in the fact that men band together to ease the burden of this expensive age? Is it ethical for the corporation to make a contract with a physician and wrong for a body of men to do the same? The object in both cases is the same—that of keeping down running expenses. The average laborer is unable, on his income, to pay heavy doctors' bills, and he has the same pride in his good name as has Dr. Madden. He, therefore, cooperates to enable him to meet possible contingencies by paying a certain sum into a common fund to insure himself against doctors' bills. This is one of the economic problems that the profession must meet, but it cannot be disposed of by resolution.

As to the quality of service: I have noticed that not all members of medical societies give good service, and not all non-

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members are without conscience and pride in their work. I have been a member of State and national societies for nearly a score of years, and I have learned that there are men in the societies whose schemes and tricks to get and hold business would shame many advertisers. I have seen a whole page in a Chicago paper devoted to Dr. J. B. Murphy. Many men have told me that they have seen many reading notices of the Mayo brothers in print. I do not advocate advertising, but I do say that if the code allowed it, ethical men would not have to resort to so many disreputable methods and trickery to get business. The reason people now go to advertisers and irregulars is because there is nowhere they can go for relief. Half the people of any community are not sure that an eye specialist fits glasses, and as it is with that so it is with many other ills; they do not believe their regular physician knows anything about them, for he never intimates that he does. When a person is sick they want an expert. It is the doctor with business instincts that succeeds, "by ways that are dark and tricks that are vain," to advertise his proficiency.

The motive that determines the attitude of the medical fraternity toward the advertiser is jealousy. A druggist will advertise patent medicines, an optician will advertise spectacles, and the doctor takes no offense —he even cultivates them as some possible help to his getting business—but for a doctor to advertise that he sells glasses, or that he has apparatus that enables him to do certain work—that is awful! Why, the fellow is a regular quack! The matter of fact is, printer's ink is a business stimulator, and wisely used it is a more honorable way of getting buiness than the methods which many of the "truly goods" practice. Advertising by others makes *their* game less efficient, hence the roar.

Not long ago our medical society discussed a plan of publicity. After the meeting a budding young surgeon gave the advertisers a very thorough "tongue lashing." The conversation drifted to more practical lines, and our young man—"who was with the Mayos, you know"—said that he was giving 50 per cent. for his cases. He made no secret of the fact that he was buying cases, and yet he is allowed to remain in the society. Not long ago a certain society acted favorably on the application of a specialist who, on his initial visit to the general practitioners' offices, offered a commission for business.

It is not lodge practice and the doings of the "unethical" that are "threatening the dignity, honor and standing" of the profession, but the suspicion of the patient that he is being bought and sold, that his family is being exploited for the good of the doctor's income, and that ethics is but a fence for the better exploiting of the community. Comparatively few physicians observe the spirit of the code, although most are quite punctilious in observing the letter, and the people know that fact fairly well. They know that the code is used to keep the new man quiet, and as long as possible keep him out of business—he might prove the better man. The attitude of the well-established physician of to-day is that of the man who, about two thousand years ago, went up into the temple to pray, and began by telling the Lord how good he was.

When the people can be sure that the advice they get from the doctor is honestly given, when they can be sure that their confidence is not used as a means for a larger fee, when they can be sure of a "square deal," "the dignity, honor and standing" of the profession will not need resolutions to maintain them.

The standing of our fathers is gone, and gone forever. The day of the family doctor is past; we cannot bring it back. Medicine, like pharmacy, has become a business, deny it as we may. If the physician is to retain an honorable place in the modern world he must be a modern man, and not an ancient recluse. The code needs revision, we need to take the public more into our confidence. We must appear to be what we really are. Our methods of advertising are unethical, yet allowed by the code. Our "swell outfits" and big automobiles and other methods of attracting attention are those of the montebank and shyster. What we can dead-head or disguise as local news in the papers goes, but to honestly buy space and pay for it—that is quackery.

The ability to divide a fee is often more sought for than skill. The reputation that can command a high price is sometimes more desirable than a trained brain. It lessens competition. As long as the young doctor sees the leaders "taking gifts" and practicing chicanery to get and hold business, just so long will he feel justified in taking the opportunities that come to him for advancement financially, particularly when they hurt no one but the man that

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opposes his progress. "What is sauce for the goose is also sauce for the gander," which means, in plain language, that as long as the code is used principally to keep the fledgling down and protect the man that has "arrived" the fledgling will take such means as are within his reach to promote his interests in spite of the "truly goods."

The rich man can buy autos and good clothes and swell around at club and theater, his wife can become prominent in society and woman's meetings, and promote her husband's interests. He can run a hospital or sanitorium and advertise it, and yet keep within the code, but the only way that a poor man can afford to gain publicity is denied him. Are we honorable professional men or are we scheming pharisaical hypocrites?

In the spirit of fair play, to allow everyone the opportunity to express any reasonable ideas, we publish the above communication, although expressly differing from the Doctor's ideas on advertising. In our opinion, all advertising by physicians and surgeons is bad for the true spirit of the profession, as well as bad for the laity, and to let down the bars for all to advertise at will would be to eliminate the poor man entirely by making it impossible for him to enter the practice.

The author of the communication is an ophthalmologist and laryngologist in a prosperous small city. He has had opportunity of witnessing both sides of the controversy. In a letter to the editor he adds the following:

Perhaps my letter is too radical for you to print. I would like to see it printed, for I believe it is needed. I never advertised a line in my medical career, but I have been in the advertising business, and I know what goes on behind the scene. The scramble for a place on Quality Hill, the effort to out-wit your fellow, the desire to make a show, to be known as a leading man of the city is not worthy of men who claim to follow a learned profession. The advertisers are souls of honor when compared with the "ethical" man's method to get business. I am not a pessimist by nature, but I have run into the fee-splitting question from all sides. I have seen the desire for a fee so far outweigh all other consideration that sometimes I think I will get with honest men and become a quack.

All our cities have at some time been cursed with ambitious men who manage to get themselves in public print as the great surgeon or other specialist. We have had them here in Philadelphia—a surgeon, an ex-president of the A. M. A., who was heralded with a write-up whenever he went to Europe and when he came back, or whenever he did anything else that any ordinary citizen would do—and frequently with his picture; an ophthalmologist who transplanted rabbits' eyes to the human subject and did other wonderful operations; and the internist who had made a great ethical fight before the Amer. Med. Assoc. about proprietary remedies, yet who managed to get interviewed about every medical subject that excited popular interest. But we have almost entirely broken up this practice. The best method of accomplishing this is to keep a medical society scrap-book of all such articles and call the culprits before the society to explain how it happened.—Editor.

Thoughts on Fees and Fee-Splitting.

To The Medical Council:

First. Fee-splitting is purely a matter of agreement between two men. Outside of these it is nobody's business.

Second. The growler about fee-splitting usually is a coward and lacks the courage to ask a decent fee for himself.

Third. Every physician who lowers his fee lowers it for the whole profession.

Fourth. Every physician who demands and receives a large fee helps to raise the fees and elevate the standing of all physicians.

Fifth. Our profession is half a business, and a prevailing opinion among the laity is, "If you do not charge much you are not worth much." Better charge too much and reduce.

Sixth. Do not pass any sleepless nights over the patients who might by chance overpay some doctor because of fee splitting or any other cause. All such patients are in asylums. Stand by the fee-splitter and be thankful that he has the backbone to collect a fee for you.

Douglas H. Stewart, M.D.
128 W. 86th street, New York, N. Y.

[We have received, too late for publication, a most excellent article on "The Physician's Income," in which the question of fee dividing is very strongly discussed. We should like this department to be an open forum for the frank discussing of this and some other questions of professional policy until the best ideas are brought out, so that the question may be intelligently decided. This can not be done by suppressing honest views or concealing actual facts and conditions.—Ed.]

To The Medical Council:

I agree heartily with you in your editorial (September Council), on medical books. In the last issue I notice an article on the evils of the lodge system practice and I also heartily agree with the writer of this article, Dr. Madden, in all he says, and have felt for some time that this practice should be put down at once, otherwise in a very few years, in my estimation, the practice of medicine will be chiefly confined to the lodge doctors and hospitals.

Worcester, Mass. E. A. Leavitt, M.D.

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Who Are the Real Victims of Fraud?

Not the experienced financial men, the bankers and brokers, but those who have but little time to study financial matters, and to whom a promise of 50 per cent. dividends seems real and is very attractive. These are mainly professional men, clerks, and working people. Doctor, we must help to protect them, so that they will keep their money at home to make themselves and families comfortable, so they can pay their bills—your own included. Let every State this coming winter enact a law similar to the Kansas law, for the proposed selling of stock. That will cut off at least ninety out of a hundred of the fake schemes. Then a similar federal law would be a still further protection. Doctor, speak to your local editor, your candidates for Legislature and Congress about it. The interest of your people is your interest also. Use your superior knowledge and intelligence for their protection.

Eastern Land Swindlers.

A favorite method of New Jersey and Long Island real estate swindlers is to offer to give a lot away for the supposed influence of the recipient in inducing others to buy. There are, of course, surveyors, conveyancers and recording fees to pay, which amount to several times the worth of the sand or swamp lot given. Then, as the purchasers are scattered out at variable distances from the place, the company (swindlers) send out annually to them a fictitious statement of the taxes, which they will kindly pay for you and save you the trouble, if you will remit direct to them. The amount stated is from ten to one hundred times the actual amount of taxes. Don't buy what you don't see. If you hold land in a distant location get your tax bill direct from the County Clerk and send payment direct to him.

Trust Companies, Real and Fake.

To The Medical Council:

Two men in Chicago, well known in banking circles, decided to start a trust company. They took half the stock themselves. The other half was offered at $125 per $100 share to Chicago business men, who were selected with more care than the average man uses in selecting a wife. Not a man was invited unless his financial reputation would be more of an asset than his stock, or his advice would be of value, or because he could swing a large amount of new business to the firm that the firm would otherwise not get.

This trust company was a success.

The other day a local third-class lawyer brought a man to my office with stock in a trust company, in a city 300 miles away, to sell.

The man explained that he was selling stock to bankers only, but so many physicians had wanted stock, so he had decided to sell to physicians too. They were going to borrow money from London at 2 per cent., and loan it out in Texas at 10 per cent., so, of course, I could see the immense profit.

I told him about the Chicago company mentioned above and added that I'd been clerk there eight years.

The agent said goodbye, so did the lawyer.

G. E. Henschen, M.D.

Georgetown, Tex.

Getting Into Moral Debt.

Philip D. Armour, millionaire and philanthropist, continually warned young men against getting into debt. He loved free men and despised slaves. When asked if he admired a certain brilliant orator he said: "He may have a superb voice and fine presence, but can't you hear the rattle of his chain? That man is not free. He is under moral obligations that demoralizes him. He is not speaking the deepest thing in his soul, and I haven't time to hear any slave talk. I want a man to be just as free as I am."

On another occasion he said: "Don't get into debt—I mean moral debt. It is bad enough to get into debt financially. There goes a young man who is mortgaged. That young man is legging it along with a debt, and it will take twice as much power to get him along as the man without a debt. There are other debts and obligations that are embarrassing in their entanglements. Don't get into debt morally, my boy; don't get into debt so that you may not exercise your freedom to its limits."

To The Medical Council:

There appeared an article in the Medical Council, November 11th (page 436), where a subscriber inquires about The National Rating League, No. 438 West 63d St., Chicago.

To whom it may concern: I wish to say that The National Rating League has done quite a bit of collecting for me, and they have given good satisfaction; in fact, they collected some accounts for me that I had entirely given up all hopes of ever collecting.

George A. Wash, M.D.

Gibson City, Ill.

[We have many other letters, just received (too late for publication), all highly favorable to the National Rating League.—Ed.]

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Hawthorne Before the Courts.

At last the Julian Hawthorne mine enterprises have been brought up before the Federal Grand Jury for investigation. Seems rather late to us. When the Kansas law is enacted by every State the investigation will come first, and swindling will be prevented.

Doctor, keep your people duly warned against the wild cat insurance companies. The woods are literally *full* of them, and their stock is worthless, no difference what they promise. Let them all strictly alone.

California oil may be a good thing for those actually on the ground to look after it, but it is bad for everybody outside of California. Tell your people in your community about this, Doctor.

Look out for promotions coming from Denver, Colo., just now.. Swindlers, who have been driven out of other States, are flocking there and are using the mails in their promotions. The chances are that they do not solicit Denver citizens, however.

A reader writes us that, after reading a pamphlet from the Sterling Debenture Company, of New York, he is inclined to buy even more of the Telepost stock to add to what he now has. That, doubtless, was the purpose of the circular. Better ask your banker if you can't trust such authorities as *Collier's*, *Munsey's*, the *Financial World*, the *New York Sun*, *and* THE MEDICAL COUNCIL.

Pointers to Professional Success.

(Extracts from a paper by F. A. Butler, M.D., Harvard, Neb., in *Western Medical Review.*)

Honesty and honor are always the chief factors of success. The way to become successful is to make good in the profession. Thorough preparedness, unceasing hard work, honesty of purpose, temperate habits in all things, times and places, a desire to offer our patient an honest dollar's worth of service for his confidence and his money, will usually win anywhere. It is my opinion after doing a large prescription business for many years that it is best if one has the time to dispense most, if not all, his own medicine, and I find most patrons like this plan. Especially is this true in a country community and among people of moderate means, as it is quite saving and brings the doctor money which otherwise would go to the druggist. As people do not usually have two fees in their pockets, sometimes it is a question of getting to see your office patient but once or seeing him again when his supply of medicine runs out, for the average druggist is not doing business for the special purpose of looking to the doctor's interest, as he has other interests to look after.

With a literary taste and a thorough preparedness and an honest integrity of purpose as advised by Dr. Wahrer, of Iowa, with strict attention to business, collecting one's dues as they are made, a fair and reasonable charge, and by investing the same judiciously, keeping up with the advance constantly going on in the medical profession, attending to the medical societies and taking a post-graduate course every few years, taking a number of first-class medical journals, one is bound to succeed.

It seems to me the course mostly adopted by a large per cent. of doctors over the country, city and village alike is a course that courts failure all the way down the line; it is to seek success in the membership of the churches and lodges. I don't think any of them will add one dollar to a doctor's income.

Solidarity of the Profession.

So live and practice your profession that your influence will be for good to those with whom you come in contact; that you may build up and not pull down; that you may help and not hinder; that you may benefit and not destroy.

Your prosperity is measured by the success and prosperity of your associates and their failure or disaster has its influence upon your own labor. Lay aside all personal feeling and let your effort be for the common good. Though you care little for your colleague personally, yet help him in the hour of need, for we are all dependent upon one another. When your neighbor's house is in flames help to put out the fire lest it burn your own—if for no other reason. Discredit upon one physician reflects suspicion against all, and sterling worth in one begets confidence for all.

Let us try to do a little better each day. Let us resolve that the error of to-day shall not be the mistake of to-morrow and that the success of one case shall only pave the way for a greater triumph in the next.

And withal let us be confident. We have a mission to accomplish. We are healers of men. We must be steadfast. We must be true—true to ourselves—true to our patients. Greater honor can no man have than this. He who toils in obscurity is as deserving of honor as he who fills the high places and his final reward shall not be lacking.

Finally be not puffed up. We are all human; the best of us are far from perfect, yet all endowed with some good and all burdened with some fault we could well lose, if we viewed ourselves as in the magic mirror.—*Clinical Reporter.*

EDITOR MEDICAL COUNCIL:

I desire to express to you my high appreciation of your excellent journal and to congratulate you on the practical information you give the readers of THE COUNCIL every month. I value especially the article on "Authors of Medical Books." Also those on reporting venereal diseases and lodge doctors. How can we expect any better of young physicians when so many of our prominent doctors act as railroad surgeons.

J. T. JONES, M.D.

Jackson, Tenn.

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Drastic Action on Lodge Practice?

Every one of the papers issued by the secretaries of the different medical societies of the State has more or less to say in condemnation of "Lodge Contract-Practice." Some even suggest that drastic measures to stop it be taken by the State Society and by the American Medical Association. I wish to recite a case in point as to its value to the doctor. A genial, good-hearted doctor of my acquaintance in a northern Pennsylvania town accepted one of these contracts. In one case he attended a member of a family continuously for over three months, making from two to four visits a day and often in the night and furnished medicine for the case. For all this he received the munificent sum of three dollars plus glory—this was expressed by the patron calling the doctor a "fool." A case of doctor casting pearls before swine and the swine turning and rending him.—*Elk County, Pennsylvania, Medical Society Voice.*

Why Manipulation Quacks Multiply.

The neglect of non-drug methods of treatment by regular physicians here, in sharp contrast with our European confreres, is largely answerable for use of these valuable procedures, even if incorrectly, by hordes of non-medical advertisers. Delay in adding mechano-therapy to the curriculum of medical schools, thereby placing an undeserved stigma on the former, may explain some of the diffidence of physicians in their adoption. Supreme Courts of many States have decided that resort to such methods is practice of medicine, and here is where practitioners, abandoning these means to irregulars, lose materially. It is full time that the State authorities drive these quacks as, also, illiterate midwives, out of Pennsylvania; otherwise our much-vaunted Medical Practice Act becomes a farce and we, a laughing stock.— *Philadelphia Roster.*

Two Ways Only to Practice To-day.

It is frankly stated that the profession of medicine at the present time is a desirable career for only two classes of men; those who like work of a scientific kind and are independent of its financial income, and those who have such a leaning toward the occupation of medical men that they are prepared to content themselves with a bare living; that is to say, with incomes that are so low that their possessors find a difficulty in paying their way as members of an ostensibly well-to-do section of society, and that are much less than those commonly resulting from occupations far less exacting in the demands they make on brains, energy and time.— *St. Paul, Minn., Medical Journal.*

Excess of Doctors and Preventive Medicine.

It is shown that physicians have increased in numbers at a much greater proportionate rate than has the general population so that there are now many less possible patients to each doctor than was formerly the case; it is further shown that preventive medicine has done much to prevent disease, and that modern methods of treatment have done so much to shorten the duration of most diseases that there is much less sickness now than formerly, and that each patient requires much less medical attention.— *St. Paul, Minn., Medical Journal.*

BEST IDEAS FROM RECENT LITERATURE

Shall Venereal Diseases Be Reportable to the Board of Health?

At a recent meeting of the Medical Society of the County of New York, it was formally moved and seconded that cases of venereal disease should be classified among those which are reported to the Board of Health. The motion was put and carried.

At first sight it would seem that they undoubtedly belong in this class. On reflection, however, it must appear that there are wide differences which separate these diseases from those of the thirty-seven zymotic class, and which must be taken into consideration in dealing with them from the sociological standpoint. Boards of Health are not so much concerned with the influence of disease on the individual as its influence on society at large. The function of the Board of Health is mainly preventive rather than curative. It safeguards the public against the spread of disease and leaves the cure to the general medical profession. The effective control of contagious disease of the ordinary type depends on the ability of boards of health to quarantine those suffering from the disease. The right to enforce quarantine depends on the method by which the contagion is disseminated. The ordinary zymotic diseases are spread by fomites. Personal contact is not necessary. The presence of the infected individual amongst others who have no immunity is sufficient to spread the contagion. This is true of diphtheria, measles, smallpox, scarlet fever, typhoid fever, whooping cough and others of this class. Tuberculosis and typhoid fever are in a class by themselves since in one case sputum and in the other fecal matter or infected urine are the carriers of the contagion. In the zymotic diseases society has rightly given to boards of health the power to quarantine the affected individual and the infected premises. Moreover, the maintenance of quarantine is easy because the individual is usually confined to bed. Patients ill with these diseases have no control over their contagion, which is not the case with the tuberculous individual. In the case of the typhoid patient the control of the contagion lies with the attendants. It is quite evident therefore that the right to quarantine in the zymotic diseases ought not to be extended to the tubercular and the typhoid cases, because of the nature of the infection and the means by which it is transmitted. The right of the public to quarantine for syphilis and gonorrhea is affected not only by the same considerations mentioned as existing in the case of typhoid fever, but other and more serious questions come in which co-operate to make the right to quarantine in the venereal diseases still more doubtful. As to contagion no one can acquire syphilis or gonorrhea by proximity as in the case of the zymotic diseases. An individual with gonorrhea is not a menace to fellow-travelers in a street car nor in a crowded assembly. A patient with a zymotic disease is. The right to quarantine is certainly modified by these facts. True, a syphilitic with mucous patches in his mouth may infect a drinking cup and so convey the disease to an innocent party. but the public drinking cup is under the ban

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for other causes and is rapidly becoming a thing of the past. Syphilis insontium, not conveyed by the sexual act or by other personal contact, is rather rare; so with gonorrhea, except in the case of ophthalmia neonatorum. As a matter of fact, syphilis and gonorrhea when transmitted to the innocent are so transmitted under the protection of the marriage relation. This is deplorable, but under our present system of marriage license, at present unavoidable. Let us then say to the enthusiasts, attack the problem by making these diseases reportable. How is that going to affect matters? The first question which requires answer is, would such a procedure be legal under the present charter of the Board of Health? The writer not being a lawyer, on this point consulted one of the highest legal authorities in the State, who replied: "Under the present charter the Board of Health has no such powers. The Legislature could, however, pass a law conferring such a power." It is more than doubtful whether the Legislature would pass such a law, but suppose it does. Let us examine its probable influence on the problem. It cannot be denied that the control of other contagious diseases depends on the right to quarantine. Is the Board of Health to be also given the right to quarantine cases of active syphilis or active and latent gonorrhea? We may well pause and ask ourselves whether such a procedure would be practicable. What would be the immediate result? Concealment and a resort to the quack, injection Brou and the glass syringe, and the prescribing druggist. Such a law would increase the evil it sought to cure. No man is going to subject himself to a quarantine which would expose his immoral conduct and which in most instances would cost him his position, and in many cases involve him in domestic litigation. Such a law would be absolutely unenforceable. The chief weapon of the Board of Health is quarantine, and a quarantine of syphilitics and gonorrheics is for obvious reasons impracticable.

What then can the Board of Health do if these diseases are made reportable, as the Medical Society of the County of New York recommends? It can send polite notes of advice to the affected individual and tell him facts which his physician has already communicated. In addition the individual would become conscious of the fact that his disease was now a matter of public record. Would these records be obtainable in court by an order to the Board of Health? They certainly would. The State would thus under some circumstances be compelling an individual to testify against himself. What again would be the actual result of a law which did not admit of quarantine but simply made the disease a matter of record and polite admonition on the part of the health inspector? The same result would be obtained. Infected individuals would delay treatment at the hands of the reputable physician and seek the aid of the quack and the corner drug store.

Such a law can only defeat its own ends. It is idle to compare cases of venereal disease with tuberculosis and to expect the same results from legal practices in quite different conditions. It is a misfortune to contract tuberculosis, but not disgraceful. It is disgraceful under all circumstances to contract the venereal diseases by guilty practices and under some circumstances illegal. What we want to accomplish is to bring these diseases under control and, what is far more important, to protect the innocent from infection. We shall accomplish neither of these things by driving the victims of the disease into concealment until their condition becomes so desperate that a hospital is their only refuge.

Aside from all this, the Board of Health is not a society for ethical culture, or the enforcement of public morals; and unless it can be clearly demonstrated that such contemplated action would produce the desired results with mathematical precision, is it not fairly asked what its jurisdiction might rightfully be? For such a law could be no respector of persons, and could make no exceptions. Under its operation the physician would be compelled either to infract the law or violate a prime clause in his oath of office, often with the result of precipitating a domestic scandal and causing mental agony to innocent people, without any real hopes of protecting either individuals or the public at large from fortuitous infection.

Does it not seem that the most the Board of Health could be properly asked to do would be to include in its circulars regarding contagious and infectious diseases some practical statement setting forth the nature of the dangers attendant upon the social evil?

This problem deals with an instinct in man for the perpetuation of the race, and the real factor which, humanly speaking, always has and always will govern the gratification of so strong an instinct is personal character. Until the race has attained to an intellectual and moral plane where its individual members can see the real advantage of self-restraint and have the will power to practise it, the social evil will persist, and remain a menace to the public in spite of the enactment of laws.—Editorial in *New York State Journal of Medicine*, July, 1911.

[This is a live question, and one which deeply concerns the medical profession. It should be remembered in this connection that there are many persons, including a number of physicians, who have contracted the disease innocently, and their names would have to be reported as well as all others.—Ed.]

The Undeveloped Field in the Life Insurance Business.

Under the title of "The Undeveloped Field in the Life Insurance Business," Bessinger submitted a report to the Association of Life Insurance Presidents, at New York, June 9, 1911. An account is given of a trip through the South for the purpose of studying the sanitary condition of Southern cities in the interest of the Traveler's Life Insurance Company. Over thirty of the most prominent cities were visited. In seventeen the water plants were investigated. In looking into the water and sewerage systems the worst sections of the city were selected to see whether the old houses were connected with the sewer, or whether there was a well supplying surface water and a closet unconnected with the sewer.

As a rule most of the cities have a fairly good water supply. In probably a dozen, new water systems have been constructed within the last ten years. These have a satisfactory system of filtration. Chemical purification of water is more common in the South than in the North, where protection of the source of supply is the usual method. The extent to which the source

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of supply is used by the inhabitants is an important question. Probably seventy per cent. is a high estimate of the average percentage of inhabitants using city water in cities of 50,000 inhabitants or over. The remainder obtain water mainly from wells subject to contamination.

The condition of the sewerage systems was not as favorable. In almost every city visited there were old sections which were not sewered. It is possible to find many cities in the country where millions of dollars have been spent for sewers and water systems, and yet from a quarter to a half of the inhabitants live in houses not connected with the sewer.

The disposal of garbage was unsatisfactory in most cities; about half a dozen had incinerating plants. In the great majority of cases the garbage is dumped on vacant lots.

There is room for improvement regarding the inspection of milk, meats and perishable provisions, although the situation is much better than it was ten years ago, and there is an increasing effectiveness every year. In one large city a great public market showed no effort to screen the provisions and even the meat was literally covered with flies. The screening of provisions is a comparatively recent precaution and is of special importance in the South. In Montgomery, Ala., there was evidence of enforcement of ordinances; market doors and fruit stands were screened. Savannah, Ga., is in excellent condition in practically every respect, and has taken full advantage of all the possibilities in sanitary science. It has the best department of bacteriology in the South; it is completely piped for water from artesian wells; and the sewer system is nearly as extensive.

Departments of bacteriology were almost unknown ten years ago, so this method of city sanitary work is comparatively new. Some cities visited have departments unworthy of the name One city has a department that compares favorably with that in the great city of New York.

The general conclusions arrived at from the points investigated are: That there has been a wonderful improvement in the sanitary condition in the South in the last twenty years. The cities of the South are spending as much money in improvements in proportion to their means as those in the North. No particular section was found that is wholly superior from a sanitary standpoint. Cities in the same section, and in close proximity, vary greatly, one being in most excellent sanitary condition, another showing inexcusable sanitation.

These investigations were brought to the attention of the association for a special reason. The success or failure of life insurance companies depends on three things, the expense rate, interest rate and mortality rate. These factors are of about equal importance. The mortality rate has hardly been given serious consideration, and this must be lessened. This would benefit not only the companies and policyholders, but also be a great work for humanitty. There has been a decided improvement in the mortality rate of the country during the past fifty years, and policyholders have gained millions of dollars thereby. If some of the large amounts paid each year for medical examiners before the risk is accepted, were spent in a combined general effort to lower the mortality rate, the results in dollars and cents would be fully as great.

In conclusion, the writer advocates the forming of an organization in each city of a number of intelligent, substantial and influential men with practical common sense, for the purpose of studying sanitary conditions with a view to saving life. In every city of fifty thousand inhabitants it is possible to find men among the managers, leading agents, medical examiners and legal and financial representatives of insurance companies who, with the leading health officials, and a few men of prominence interested in such questions, could form such an organization.

Treatment of the More Common Diseases of the Skin.

Cocks, in the *Medical Record* of December 3, 1910, gives the treatment of some skin diseases which are especially trying to the practitioner.

In acute infantile eczema the question of diet is of first importance. If the mother nurses the child, the eczema may be due to some faulty condition on her part and this must be corrected. If the child is bottle-fed, the milk must be modified. Usually the child is too fat, and cream and sugar must be reduced. The eczematous baby does not rid itself of excess of food by vomiting, and that condition may be relieved by Phillip's milk of magnesia, half a drachm to a drachm twice daily. Water should be given in abundance.

Externally not a drop of water should be used. Rose water ointment is sufficient to cleanse the skin. If there is a pouring out of serum a lotion of phenic acid ♏xv, ichthyol 3i, zinc oxide 3ii, magnesium carbonate 3ii, and lime water ℥iv, should be applied every hour until the oozing subsides. If there is a crust formation, a mask is covered with an ointment consisting of salicylic acid gr. iv, ichthyol ♏xx, zinc oxide gr. xxx and rose water ointment ℥iii, and applied to the child's face.

Eczema ani in the adult is often a sequel of fistula, hemorrhoids, or constipation. Apply very hot water before retiring and follow by an ointment of ol. rusci 3ii, in ung. zinci oxidi ℥ii. This often acts like magic.

Erythema multiforme and the urticarias are most benefitted by a general bran bath. The patient is placed between sheets without drying and a lotion of magnesium carbonate 3ii, and zinc oxide 3ii, in lime water ℥iv, is applied freely until the pruritus is relieved. The vasomotor complication is relieved by pilocarpin, one-sixth grain, hypodermically.

Scabies.—The patient is soaked for half an hour in a hot bath containing tincture of green soap ℥iv, and the same amount of borax. He is then dried and an application of equal parts of balsam of Peru and vaseline is rubbed into the entire body, except the scalp, for ten minutes. The mite does not survive this treatment.

The most stubborn case of tinea tonsurans of the scalp will yield to persistent epilation, preceded by a bicholoride shampoo, and followed by an application of ung. hydrag. ox. rubr. 3ii, ung. sulph. 3i, ung. zinci ox. 3v, twice daily with a stencil brush.

Impetigo contagiosa.—The pustules are opened or the crust removed, the base is cleaned with peroxide of hydrogen. and the parts dressed with an ointment of ichthyol, 2 per cent., in white

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precipolate ointment, 2 per cent., and changed twice daily.

Intertrigo.—The acid secretion of intertrigo must be taken into consideration for the treatment, and a careful examination be made of the urine, feces and perspiration. All the moist parts must be separated and a dusting powder applied, made up of tannic acid, bismuth subnitrate, powdered boric acid, and starch, or ichthyol 3i, in the calamine and zinc lotion.

Acne.—Strict rules regarding the diet must be enforced. The writer's favorite tonic for this disease is ℞ Ferri citrat. 3ii, magnesi sulphatis 3v, strych. gr. i, syr. zingiberis 3i, aq. 3iv. A rapid impression can be made upon the pustules by an application of green soap 3i, resorcin 3i, salicylic acid gr. v, rose water ointment 3ii, each night and wash off each morning.

Psoriasis.—Externally an alkaline bath is followed by an ointment of salicylic aid gr. i, green soap 3ii, chrysarobin 3ii, oleum rusci 3i, and vaseline 3ii, which is applied to the lesions. Above the clavicle an ammoniated mercury ointment is used. Internally Fowler's solution is used, but stubborn cases yield without exception to injections twice weekly with arsenic iodide, ten minims of a 1 per cent. aqueous solution.

Tubal Sterilization.

WERNER has an article in the *New York Medical* of November 4, 1911, upon "Tubal Sterilization as a Prophylactic Measure." He considers that while the induction of sterility as a primary step is rather uncommon, that there are cases in which a pregnancy may be such an aggravation to existing conditions that the life of the patient is threatened. Tuberculosis, heart disease, marked pelvic contraction, kidney disease, pernicious anaemia, present indications for this measure.

Procedures for producing sterility other than operative are exceedingly futile. The operation of choice is tubal sterilization, either through the abdomen or vagina, but preferably the latter.

A vaginal cœliotomy may be performed by the Wertheim technique or any of its modifications. The cervix is seized with a bullet forceps at either lip and pulled down. A transverse incision is made on the anterior cervical wall at a point where the loose vaginal mucosa incorporates with the firmly adherent cervical. The bladder is now gently separated from the uterus with the finger until the plica vesicouterrina is reached. This is grasped with artery clamps at two places and incised, the bladder being meanwhile retracted. Having incised the peritoneum, several sutures are passed into the upper layer of the peritoneum, through into the anterior vaginal wall, to act as guy ropes. The retractor is now slid into the peritoneal cavity and the examining finger may palpate the uterus and the adnexa.

The tubes must then be brought into the field of action A holder is passed behind the uterus and tube and sweeps it into the incision. The tube is then seized with tissue forceps and brought out of the wound and ligated about one-half and one inch from the uterus and the portion between the incisions is removed. A No. 1 catgut thread may be whipped around the upper border of the broad ligament that has been opened for its removal. This process is repeated on the other side and the wound is closed. No drainage is necessary.

The Treatment of Patients Desperately Ill in Consequence of Accident.

Bowers, in the *Medical Fortnightly*, of May 25, 1911, discusses the condition of shock. He finds the pathology of shock so uncertain that it seems unworthy of consideration. The theories regarding its effect upon the heart and blood vessels are so opposed that they cannot be reconciled. He considers the question of shock to be a broader one than that of its vascular phenomenon. It embraces interference with the blood pressure, with respiration, with body temperature, and with the normal mental activity. Of these four things, the body temperature is of the greatest significance and importance. If the body temperature falls the blood pressure, the respiration and the mental activity fall; if the temperature is elevated, the blood pressure, the respiration and the mental condition are elevated. He points out also as a well-known observation, that in shock from an anesthetic there is an elevation in the specific gravity of the blood, and the heart must act against a circulating medium of more than normal density.

The first indication for treatment is to raise the body temperature by dry or moist heat; the second is to lower the head of the patient in order that the circulation of the brain may be benefitted; thirdly, re-establish the specific gravity of the blood by the use of saline solution, either subcutaneously, by the rectal method, or intravenously.

Patients with marked shock produced by burns and scalds should be wrapped in warm clothing, given a saline solution by rectum, and a dose of morphine. They should be kept perfectly quiet until the condition of shock abates, when the injuries can be dressed.

In shock from hemorrhage, it is very difficult to decide whether the patient is suffering from hemorrhage or shock. External hemorrhage can be seen, but internal hemorrhage presents great difficulty in deciding what to do. Contraction of the vessels may be caused either by the great loss of blood or by the irritation of the sympathetic nervous system. So it is important not only to arrest the hemorrhage, but also to restore the person from the shock. This can best be done by means of infusions of saline solution.

The use of the tourinquet in external hemorrhage and in operations has often been detrimental to patients. Care should be taken to apply it as close to the seat of injury as possible, especially to apply it below the line of amputation. Otherwise the circulation of the tissue is interfered with and the devitalization may invite infection. In cases of gangrenous phlegmon or diffuse arthritis, where amputation seems to be justified, the patient must first be relieved from shock and the vascular system must be brought as nearly as possible to a normal condition. The use of such drugs as adrenalin, alcohol, ergot, and nitroglycerin, as vaso-constrictors and vaso-dilators, in relieving shock is attended with uncertainty, because one may not know which is indicated. It is better to use the saline solution to restore normal circulation.

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Practical Hearing Tests.*

We may examine the function of the ear for the double purpose of ascertaining the relative hearing power, as compared with a normal ear, and of determining the seat of a lesion that is causing any existing impairment of hearing. While the tests of hearing are not upon such an accurate scientific basis as those of vision, they are of considerable practical value in all cases of defective hearing. Only those tests which are serviceable and which should be employed as a routine will be considered here. They consist of the use of the examiner's voice, a stop-watch, several tuning forks, and a Galton whistle; such an equipment is neither elaborate nor expensive. Let us consider how to use them, taking them in the order in which they may be best employed to secure results and conserve time.

THE VOICE.—The whisper is the best means of employing the voice as a testing agent, and in order to secure uniformity it is advisable to inspire deeply, make a forcible expiration, and then whisper on the residual air. The tone thus produced can be heard by the normal ear, in a quiet room, at a distance of 20 feet. The patient sits with eyes closed, to prevent observation and reading of the lips, with the ear under examination directed toward the examiner and the other closed one of his fingers or a pledget of cotton. He is requested to repeat whatever he hears. The use of numerals, in combinations under 100, affords sufficient variety for testing and avoids, in a large measure, that guessing which takes place when sentences or phrases are employed. The examiner starts at the full hearing distance for a normal ear and approaches the patient until close enough for the patient to hear and accurately repeat the figures named.

In recording the hearing ability, the distance at which the normal ear should hear that sound is used as the common denominator, and the distance at which it was heard by the person being tested is used as the numerator. For instance, if the whisper is heard at 10 feet, the hearing power for the whispered voice is 10/20; if at 3 feet, it equals 3/20. Should the whisper not be heard at all, then the conversational tone may be employed. This will be necessary only in cases of pronounced deafness, because spoken words can be heard at a distance of 40 feet in a quiet room. It must be remembered, too, that when one ear is good it is difficult to be sure that sounds are absolutely excluded from the good ear.

THE WATCH.—Watches vary so much in the quality and quantity of sound produced that they do not afford a very accurate means of measuring the hearing power. Any watch used for the purpose should first be tested on a normal ear and the distance determined at which its ticking can be heard. This distance, in inches, becomes the common denominator for all tests made with that watch, and the fractions should not be reduced in making records; for instance, to say that the hearing power for the watch equals 10/40 should mean that a watch that should have been heard 40 inches away was actually heard only at 10 inches, and another party reading that record has some idea of the character of sound produced by that watch, whereas, if the fraction be reduced so that the hearing is given as ¼, it conveys no information as to the nature of the test.

THE ACOUMETER.—To provide an instrument for universal use that produced always the same sound, resembling as nearly as possible the tick of a watch, Politzer devised his acoumeter, which consists of a vulcanite upright handle, with grooved depressions at either end for grasping between the thumb and forefinger, supporting two short bars of metal, one fixed and the other movable as a lever. By pressing down the short end of the lever bar a definite distance and then releasing it, the long end of the bar is permitted to drop a fixed distance upon the stationary metal rods. The resulting ticking sound is much like the tick of a watch and can be heard by the normal ear about 15 feet in a quiet room.

TUNING FORKS.—The nearest approach to scientific accuracy combined with practical clinical usefulness is found in testing the hearing with tuning forks. The object of their use is threefold: first, to determine the range of audition or quality of hearing; secondly, to ascertain the relative quantity of hearing power as compared with a normal ear; thirdly, to draw some inference as to the location of the lesion causing the impairment of function.

(*a*) *Range of Hearing.*—The normal ear can hear and appreciate as a musical sound base notes as low as 16 vibrations per second, but for ordinary testing it is unnecessary to test for the extreme lower tone limit. The lowest fork commonly employed is known as the Dench fork, which, with the clamps in place at the extremities, has a note of 26 v. s., and, by varying the position of the clamps, permits of sounding higher notes up to 64 v. s., when the clamps are entirely removed. If the person being tested cannot hear this fork we proceed to use others, progressing by octaves (C=128 v. s., C=256 v. s., and so on up to C = 2048 v. s. of what is known on the market as the Hartmann series of forks) until one is found that can be heard, and this will be recorded as the low tone limit in that person.

The normal upper tone limit has not as yet been so accurately determined, physiologists differing in opinion as to the highest note that can be appreciated as musical. Certainly it appears to be above fifty thousand vibrations per second. A set of tuning-forks which would cover the entire range from sixteen to fifty thousand v. s. would be too elaborate and too expensive for general use and, in consequence, a simpler device has been prepared for ascertaining the upper tone limit. This instrument, the *Galton whistle,* is constructed on the principle of an organ pipe and consists of a solid rod fitted to slide neatly into a metal tube which has a small notch in one side, near the free end, and over the end of which a rubber air ball can be attached. The tube has an outer cylindrical casing that is attached to the inner rod by a screw, so that by turning the former the latter is made to move up and down in the tube, thus varying the distance between the end of the rod and the whistle notch. The outer cylinder is marked to show

*Read by Dr. H. O. Reik, of Baltimore, Md., Associate in Ophthalmology and Otology in the Johns Hopkins University; Surgeon in the Baltimore Eye, Ear and Throat Charity Hospital, at the Ninth Annual Meeting of the National Association of U. S. Pension Examining Surgeons, held in Washington, D. C., May 2, 1910, and reported in the September, 1911, issue of the *Monthly Cyclopædia.*

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tenths of a turn and the inner tube to show complete revolutions. When the rod is exactly opposite the notch, compression of the air bulb will produce the sound merely of escaping air. At about one-half a turn of the rod a shrill, high-pitched note is emitted which can be appreciated as a whistling sound by most normal ears. This corresponds to a musical note of approximately 50,000 v. s. If it is not heard by the person under examination, the rod is turned and lower notes successively produced until a whistle is recognized. By reading off the number of turns and fractional parts of a turn, as for instance, 0.7, 1.5, or 2.3 of a turn, we can see how far that ear falls below the normal upper tone limit. The value of these tone limit tests lies in the fact that a marked loss of hearing for low notes indicates a lesion in the transmitting apparatus, while a similar inability to reach the normal upper tone limit points rather to disease of the perceptive apparatus.

(*b*) *Quantitative Tests.*—A tuning fork of the middle register—generally the octave above middle C (512 v. s.)—is selected for all other fork tests. Forks having the same note may yet vary greatly in size, shape, and weight, and consequently in the duration of vibration under a given stimulus. This makes it necessary to test any fork intended for clinical use, in order to learn the length of time that it should be heard by a normal ear, the time thus determined, in seconds, to be used as the common denominator in recording future tests. The duration of *air-conduction* is tested by holding the fork about an inch from the external meatus, and of *bone-conduction*, by resting the handle of the fork upon the mastoid process. The length of bone-conduction is generally about one-half that of air-conduction. A falling off in ability to hear by air-conduction, normal bone-conduction being retained, indicates that the deafness is due to interference with the transmission of sound waves,—obstruction in the canal, or disease of the tympanic membrane, tympanum, or ossicles. Reduction of bone-conduction can only result from impairment of perception of sound,—disease of the internal ear or auditory nerve. A diminution of both air- and bone-conduction suggests that the disease, beginning in the middle ear, has come to involve the internal portion of the organ.

(*c*) *Weber's Test.*—If a tuning fork be set in motion and held in contact with the skull in the median line, it will be heard by bone-conduction in the same manner as if placed over the mastoid region, and if ears are normal the sound is simply heard without reference to either ear. If, however, one ear is diseased or more so than the other, the sound is referred to the bad or worse ear if the lesion is situated in the transmitting mechanism, and to the good or better ear, provided the lesion is in the perceiving part of the organ.

Summary of Hearing Tests.—The voice, watch, and acoumeter are inaccurate tests, but must be employed because they represent sounds of great importance to the patient. The tuning forks are of greater scientific value, enable us to determine the patient's relative range of audition and comparative hearing power, and afford assistance in diagnosing the character and location of the lesion causing deafness. A rise in the low tone limit, impairment of air-conduction, and reference of the sound by Weber's test to the bad or worse ear, all point to disease of the transmitting mechanism, *i. e.*, to obstruction to the passage of sound waves through the external auditory canal or middle ear. A diminution in the upper tone limit, impairment of bone-conduction, and reference of the sound by Weber's test to the good or better ear are indications of lost function in some part of the auditory nerve.

On the Uses of Nickel Sulphate in Medicine.

Kolipinski in the *Monthly Cyclopedia and Medical Bulletin*, of June, 1911, reveiws the medical history of nickel and gives the results of experiments on many different animals.

In practical medicine the sulphate and bromide of nickel seem to be the most used salts. The dose of nickel sulphate is one grain after meals. It has active bactericidal power and is effective in an aqueous solution of a strength of one or two per cent. in the commoner parasitic skin diseases, such as impetigo contagiosa, pityriasis versicolor, trocophytosis, and eczema marginatum. In acne vulgaris, chronic urticaria and erythema it is of considerable benefit given internally, giving relief from the itching and burning of these eruptions. It is useful in taking the place of arsenic in chronic psoriasis to hold in check the tendency to recurrence and the spread of existing disease.

The influence of nickel on the nervous system is well marked. It seems to be fully the equal of arsenic in efficiency, and has none of the disagreeable disturbances of mild arsenicalism. Chorea can be cured in three to four weeks and cases of stammering in children or adults improve after the sulphate has been taken for two or three months.

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Looking Forward, with Thoughts on the Past.

With this issue ends Volume XVI of the Medical Council, and the Editor cannot let this occasion pass without wishing from his heart all joys for the approaching Christmas season and all good things for the New Year to those who have so faithfully aided him, by their contributions, subscriptions, advertising, and advice, in carrying on the work of editing and publishing this journal for the past sixteen years.

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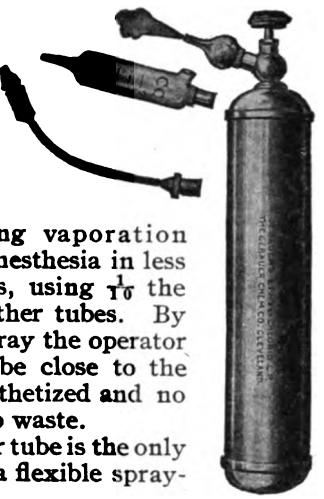

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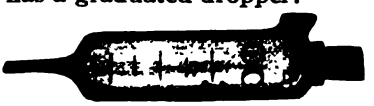

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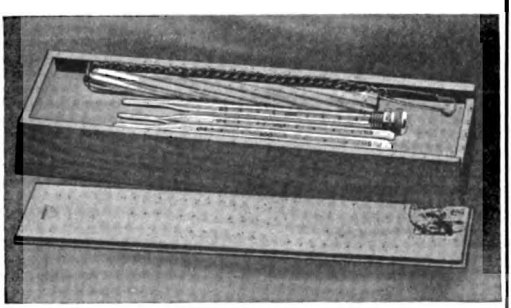

This assortment consists of one 1-minute Thermometer in aluminum case with chain; one ½-minute Thermometer and 1 self-retaining rectal Thermometer. These Thermometers are certified in comparison with United States Standard and are guaranteed to be accurate. They will be replaced if not found satisfactory as long as they are not broken. The reason we can make this price is that we cut out the middle man's profit. Thermometers from the manufacturer to the doctor. Money refunded if not absolutely satisfactory. *Delivered to your office for $1.25.*

VAN, the Thermometer Man
Rutherford, N. J.

Current Wit and Humor

In this column bright sayings, short practical therapeutic paragraphs, etc., are presented for our readers' edification.

Not All the Time.

He was a man who stuttered badly. His friends finally persuaded him to consult a specialist about his affliction.

"Do you stutter all the time?" asked the expert.

"N-n-n-no," the sufferer answered, "only when I t-t-t-talk."

Trips for Recuperation.

Doctor, you *know* the great advantage to your patients to be derived from a change of scene and climate. Your patients cannot fail of being much benefited by a sojourn under the blue skies and genial sun of the West Indies, Bermuda, etc. It transports them from ice and snow to a real fairyland. When ordering a rest, do not forget that the famous Red Cross Line of steamers make special cruises to these points at very low rates, which give your patients just the rest and change required to renew their vigor and health. Send for illustrated booklet fully describing these cruises. Mention THE COUNCIL and write Bowring & Co., 17 State street, New York City.

(Continued one leaf over)

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CREOSOTE is an old remedy. It's value recognized by all, yet it is little used because of the difficulties encountered in its administration.

We have perfected a creosote that overcomes all difficulties.

This perfected product is a chemical combination of creosote with calcium.

It is a reddish-brown granular powder and contains approximately 50 per cent. pure beechwood creosote.

It might properly be called SOLUBLE CREOSOTE since it mixes in all proportions with water.

It is a remarkable remedy, not only in tuberculosis and bronchitis, but in coughs and colds, pneumonia, typhoid fever, indigestion, diarrhoea, &c.

Published reports of results obtained from this product seem exaggerated until you have opportunity to observe them, then the skeptic becomes an enthusiast.

REMARKABLE RESULTS

I have dispensed in the last year over half a hundred bottles of Calcium Creosote in not less than twenty cases of various and varying conditions and with benefit to all.

My experience with Calcium Creosote has been more uniformly satisfactory in cases requiring respiratory stimulants and antiseptics than any one medicament I have ever employed. I cannot account satisfactorily, even to myself, for its highly beneficial effects, but that it is eminently antiseptic and reconstructive to enfeebled mucus surfaces I am fully convinced.

A lady living six miles from town sent for me to see her for a very bad cough. I found her in a deplorable condition, so much so I did not believe she could live a month. Two brothers had died two and three years previously of pulmonary tuberculosis. The stereotyped medication in such cases appeared so utterly useless I did not attempt it. I gave her 4 ounces Calcium Creosote, with instructions to take two teaspoonfuls in glass of water every three hours, instructing her to send for the other part of the bottle should the amount I left appear to benefit her. **In about a week, to my great astonishment, she came into my office to get the rest of that bottle,** declaring she never had anything help her so much in her life. She has taken seven or eight bottles since, comes to town when she pleases, and seems to be entirely cured. The case appeared to be one of the most hopeless I have ever seen, and her recovery is little short of a miracle, and without doubt due to the use of Calcium Creosote.

Another lady in the city had severe cough, tonsilitis, bronchitis, great difficulty in swallowing, gastric disturbances, constipation, etc. This patient had every indication of a pre-tubercular condition. I gave one teaspoonful Calcium Creosote in half a glass of water every three hours. In three weeks every symptom disappeared, tnough she still takes occasionally as a prophylactic.

As a remedy for coughs of almost every variety I find it much more satisfactory than mixtures containing opium in any of its many and various forms.

R. H. B., M.D., Tenn.

IT IS INEXPENSIVE

A pound of powder makes a full gallon of solution by adding water only. ***Price, $1.50 per pound (by express paid $1.75).***

We also supply coated tablets, representing one teaspoonful solution. ***Price, $2.00 per thousand (by express paid $2.25).***

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Signed ..... *M. D.*

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I wish every physician to know what my personal work for women really is, and does, because physicians who fully understand it frankly welcome my help—they send me hundreds of patients.

Every physician has cases in which an individual, scientific, personally directed course in proper exercise, breathing, bathing and diet would greatly assist to build up.

My exercises will materially help your cases of Chronic Constipation, Torpid Liver, Indigestion, Anemia, Neurasthenia, Weakened Heart Muscles, Undeveloped Lungs, Poor Circulation, Uterine Displacement, increase the oxygen-carrying power of the blood, by building up and strengthening the physical and nervous system.

I teach women how to walk, how to stand correctly, how to breathe, how to exercise normally, so that no organ is displaced by over or improper exercise or imperfect poise.

The mental interest and incentive developed by the individual lessons dispel that languor and indifference which physicians often find hard to cope with.

I study each pupil's special requirements, and prescribe for her individually, just as you prescribe for your patients. I give no promiscuous exercise, but direct each woman according to her needs and her strength. I have spent years in the study of anatomy and physiology, and accept no cases where pronounced pathological conditions are present, as I know the possibilities of my work and I know its limitations.

In many cases I insist that the pupil have the consent and advice of her physician; in others, I require a regular weekly examination by physicians.

For 12 years I gave personal instructions to women before attempting instructions by mail. Upon request, I will send you, with information, concerning my work, any one of the following lectures: A Good Figure; Circulation; Body Manikin and Position of Vital Organs; Ideals and Privileges of Woman; Character as Expressed in the Body; Mind Over Matter—The Nervous System—Effect of Habit Upon Life—Foods; Self-Sufficiency—Mental Poise; Motherhood; The Vital Organs—Their Uses and Abuse.

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13 days, $75 up; 19 days, $100 up

TO **Bermuda—Nassau—Havana,** 3100 miles—13 days, $75.00 up. December 23d (covering the Holiday season), and January 10th, after the Holidays.

To **Nassau—Havana—Kingston and Colon.** 19 days—4600 miles—$100.00 and up. Jan. 27th.

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STEPHANO

to the West Indies on short cruises, enabling busy professional or business men and women, for the first time, to cruise among the tropical West Indies islands in a limited time and at a limited cost.

Sea sports, swimming pool, excellent cuisine, orchestra. Number limited to 150—no crowding on ship, or at ports of call. Ship lands at dock, avoiding unpleasant transfers in small tenders.

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Limit will not be exceeded

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BOWRING & CO., 17 State St., NEW YORK

Current Wit and Humor

Two negro men came up to the outskirts of a crowd where Senator Bailey, of Texas, was making a campaign speech. After listening to the speech for about ten minutes, one of them turned to his companion and asked:

"Who am dat man, Sambo?"

"Ah don't know what his name am," Sambo replied, "but he certainly do recommen' hisself mos' highly."

Tuberculosis.

In the treatment of tuberculosis the new product, Diorodin, has had marked success in foreign countries. Diorodin is a therapeutic agent of great promise. It is a radio-active-mentholated iodine. In France it has been very carefully tested and results scrutinized. Complete reports of these tests will be sent to interested physicians free, if THE COUNCIL is mentioned. Address Louis Gero, Ltd., 206 Broadway, New York City.

Mr. Biffit—I want you to give my wife a little medical advice.

M. D.—But I'm a veterinary.

Mr. Biffit—O, that's all right; she's a little hoarse.

Remember Pulvola Toilet Powder, for infants, or bedridden patients. It immediately relieves the itching and burning skin. Samples and literature on request, if THE COUNCIL is mentioned. Address Pulvola Chemical Company, 114 Lindon avenue, Jersey City, N. J.

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the whole body usually suffers; every function is depressed, every tissue shows the lack of adequate nourishment. Effective treatment, therefore, should aim to accomplish not merely cardiac stimulation, but a great deal more. This is why

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MAKES PLAINER THE RAISON D'ETRE OF
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Current Wit and Humor

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Perhaps .

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is a curable disease of the lungs. This is the revised version, the antithesis of the old threadbare and decidedly raw pronunciation of "Incurability." The observations gathered during the last two decades demonstrate conclusively the specific therapeutic value of McArthur's Syrup of the Hypophosphites in all chronic pulmonary disease, and particularly in pulmonary consumption. It is set down as a Twentieth Century Fact that the chief utility of this matchless Syrup lies in its improvement of the local nutrition of the diseased lungs by yielding up phosphorus. Under its administration—as has been shown over and over again at the hands of the best of practitioners—the patients improve in their general condition, the appetite is no longer capricious, the nutrition is augmented, and the further progress of the disease is stayed permanently. When it is considered that specific medication of the lung tissue is at best doubtful, and not attended with any gratifying material success, attention must be directed to such means as will improve the general condition of the patient; and among these means the Syrup maintains its high position. It is no longer a matter of experiment and theorizing, no longer a vexed question. Thinking practitioners look for no remedy of future discovery, but—with reliance on early diagnosis, tonics, stimulants and care of the possible complications—they place the utmost confidence in this well proved measure, which nutrifies every tissue and every fluid, controls the suppurative tendencies, and promotes a healthy cicatrization. And these indications cannot be as well filled by any other measure or by any other preparation of the hypophosphites. The lungs ask for healthy tissues of such a character as will resist the encroachment of the tubercular bacillus, and for repair of those tissues which have suffered by such encroachment. And this Syrup gratifies the demand. It has been preached and proclaimed, year by year: "The bacillus tuberculosis shuns the tissues where phosphorus abounds;" and, mark well the bulwarks—the Syrup is the one preferable factor in procuring this abundance. The clinical reports of the utility would fill volumes, and the deduction is to be found unmistakably, incontrovertibly, in the manifesto that illuminates the doctrine—"Consumption is a curable disease of the lung."

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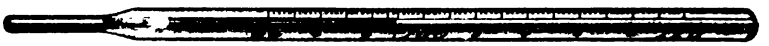

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Current Wit and Humor

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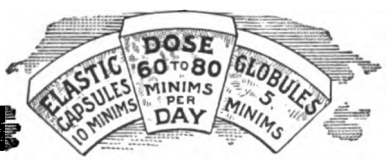

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For the Treatment of Tuberculosis

Edwin Gladmon, M.D., Supt.

Southern Pines, N. C.

Aug. 7th, 1911.

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By Edwin Gladmon, Supt.

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Current Wit and Humor

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will be found most effective. We do not claim for it all the virtues, but we ask every physician to try it.

SAMPLES AND LITERATURE ON APPLICATION

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The Most Distinctive Safeguard

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Mercury bichloride . . 7 gr.
Citric acid . . . . 3.48 gr.

Supplied either white, blue or pink, in rough-edged bottles of 25 or one pound. An additional safeguard that both you and your druggist will always appreciate. *May we send you a sample?*

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DIETITIANS—

A new institutional and scientific treatment for Obesity without the aid of drugs. ¶ In order to thoroughly demonstrate this new treatment, I have equipped my house, 143 W. 71st Street, where treatment can be had similar to that which will be given at the three sanitariums now under construction.

OUR METHOD OF TREATING CASES IS

1. **Constant Supervision of the Patient.**
2. **Regular Systematic Graduated Open Air Exercise.**
3. **Regulation of the Diet.**
4. **Plunges and Swimming in the Pool.**
5. **Hydrotherapeutic Treatment.**
6. **Use of Electricity in Every Useful Form for reducing blood-pressure and removing fat.**
7. **Neuheim and Schott Treatment for Heart Affections.**

The three Sanitariums now constructing will all be especially equipped for the treatment of obesity and its complications. They are located in Connecticut, Long Island and New Jersey. For more detailed information write to-day to

GEORGE J. GLADMAN, M.D., C.M.

Specialist in the Treatment of Disorders of Metabolism and Nutrition

143 West 71st Street, New York

Associated with Dr. Gladman will be Colonel A. H. Appel, Medical Corps, U. S. Army, retired.

Patients referred to us still remain under the care, advice and prescription of their own physician.

Pulvola Toilet Powder

(Stearate of Magnesia)

See "New and Non-Official Remedies," 2d Edition, page 130

¶ A non-absorbing, non-paste forming, non-fermenting powder for INFANTS, corpulent and bedridden patients.

¶ Absolutely different from the starch and talc powders.

¶ Smooth as oil, sheds water like oil.

¶ Has long been called THE DOCTORS' BABY POWDER and prescribed for ten years by leading Pediatrists and used in a large number of Baby Hospitals.

¶ To know PULVOLA is only half the battle to establish a base of supply by interesting the druggist is the other half.

Samples for the obstetrical bag on request.

PULVOLA CHEMICAL CO.
114 Lindon Ave., Jersey City, N. J.

Current Wit and Humor

The Inevitable.

"My husband is particularly liable to sea sickness, captain," remarked a lady passenger. "Could you tell him what to do in case of an attack?"

"'Taint necessary, ma'am," replied the captain. "He'll do it."—*Tit-Bits.*

Doctor, have you tried Idoneen, the latest method of administering Iodine internally. It fills a long-felt want. Better get acquainted with it. Sample and convincing literature will be sent our readers free, if THE COUNCIL is mentioned. Address Idoneen Chemical Company, Cleveland, O.

Alaska makes the capitalist heart grow fonder. —*Life.*

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Now especially is the time when you can appreciate having your traveling roads smoothed out, no matter how rough. Truffault-Hartford shock absorbers on your auto will do this, and you will enjoy the comfort. Not only that, but they also materially reduce your tire and repair bills. Better have them applied on your auto, Doctor. They will save much money and machine soreness. Write for special information to COUNCIL readers. Address Hartford Suspension Company, 173 Bay street, Jersey City, N. J. Mention THE COUNCIL.

(Continued one leaf over)

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Current Wit and Humor

A Modern Drug Store Ad.

Just drop into our store to-day
And see the bargains fall.
Our peerless bargains bring disease
Within the reach of all!

In the treatment of consumption, McArthur's Hypophosphite has earned a very high reputation. Send for very interesting literature. See advertisement on another page and take advantage of the special offer made therein. Mention THE COUNCIL when writing. Address McArthur Hypophosphite Company, Ansonia, Conn.

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Most excellent results in these conditions have been achieved by the use of Ramsdell's Sulphur Cream. Send for sample and booklet giving reports of other physicians. Mention THE COUNCIL and address Ramsdell Drug Company, 763 Fifth avenue, New York City.

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Steel, when rusty, may be cleaned by giving the article a good coating of sweet oil, leaving it for a few days and then rubbing it with unslaked lime.

The hot plate of the kitchen stove may be cracked when very hot by cold water being upset on it when a heavy boiling pan is being placed on the stove.

A Word About Leggings—A Happy Thought.

A physician who found no leggings to suit him got up a pair for himself. They were so good he had them patented and manufactured for sale. They are built on a steel frame of two clips and three light perpendiculars, so as to fit the leg anatomically. You just spread them at the back; slip them over the leg; and let them go. There they are. To remove them, take hold of the extension on the knee and pull them straight off. There *you* are. They are handsome as riding-boots, and a perfect protection against the weather. The inventor has used them for four winters, and has not bought a lap-rug in all that time. He drives his own car.

The Doctor who gets a pair will think, as the inventor does, that, if he could not get another pair, he would not take $25.00 for what he has now. They will last three or four years. If you address the manufacturers, they will send you literature and samples of cover material. If you have any sort of faith, you will send your money and get a pair. If you do not like them you can return them in good order and your money will be returned. If we did not know what we are about we could not make this offer. The risk is all on our side. But, we don't count it a risk.

Black Leather $4 00
Khaki 3 00

In ordering send measure of leg from bottom of heel to top of patella, and girth of calf over trousers. (Mention MEDICAL COUNCIL.)

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50% Better

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1 All claims or suits for alleged civil malpractice, error or mistake, for which our contract holder,
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3 Or that of any other person (not necessarily an assistant or agent)
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7 Without limit as to amount expended.
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9 If we lose, we pay to amount specified, in addition to the unlimited defense.
10 The only contract containing all the above features and which is protection per se. *A sample upon request.*

The MEDICAL PROTECTIVE CO.
***of* Fort Wayne, Indiana**
Professional Protection, Exclusively

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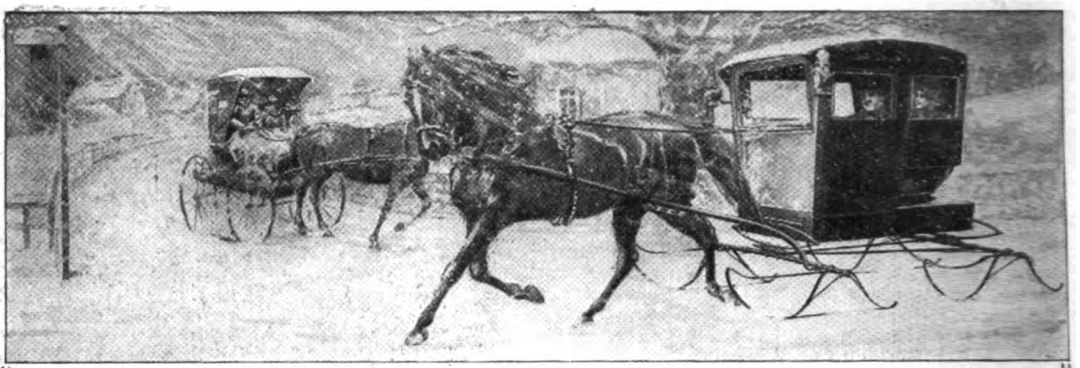

WHICH WILL YOU RIDE IN THIS WINTER?

Will you use an ordinary top buggy and expose yourself to the cold wind, the driving rain and the freezing snow—or Will you use a Cozy Cab and protect your health, your comfort and your good nature?

COZY CABS

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You will find Cozy Cabs are just as comfortable on wheels as on runners. Start out on a warm, pleasant day with the Cozy Cab open—front window up and roller door side curtains open. If the wind grows cold, if a chilling rain falls, if the snow flies, you can completely close the entire Cab in 30 seconds **without leaving the seat.** Smoke, if you like, for the Cozy Cab is scientifically ventilated. The air in the Cab is kept fresh and clean without draft.

Cozy Cabs are 40 to 100 pounds **lighter** than any other storm-proof vehicle. Cozy Cabs are no experiment—thousands of physicians throughout the world are using and praising them.

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Current Wit and Humor

Medical Tact.

A Western physician, who is quite aggressive, has the following notice prominently displayed in his office:

"There i$ a little matter that $ome of my patient$ have $eemingly forgotten. It i$ unnece$$ary to $ay that I allude to the fee$ for my $ervice$. Money i$ needed in my bu$ine$$ and mu$t be had."

Increased Income.

Doctor, you can easily increase your income, and your practice also, if the right method is pursued. The quickest way is by relieving your patients and pleasing them. This you can do by taking advantage of the possibilities affored by High Frequency electricity.

You should acquaint yourself with this up-to-date method of treatment and prepare to reap the dollars and reputation due you.

See the advertisement of the Wm. Meyer Company on another page, and send for a copy of the book on "High Frequency Treatment." Its free to COUNCIL readers, if THE MEDICAL COUNCIL is metioned. Address the Wm. Meyer Company, Madison and Clinton streets, Chicago, Ill.

Also, note the specially low prices on their instruments and electrodes. They are the best and at the same time cheapest.

(Continued one leaf over)

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Whooping Cough

cut short and symptoms promptly ameliorated by **Diatussin,** in **one drop doses** twice a day. Given early, **Diatussin** prevents the paroxysmal stage. Readily taken by children, contains **no narcotics** or **sedatives.**

Innumerable, unsolicited reports from physicians the country over, who have used **Diatussin,** speak very highly of results obtained in combating the dreadful symptoms of whooping cough. Some of these reports can be had on request.

Original Package Sample of Diatussin sent on receipt of ten cents

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solves the digitalis question **better than any other digitalis preparation** on the market. Being physiologically standardized, it does not sway to or from and **contains not one, but all** the active principles of the plant. Acts almost immediately; well borne, not cumulative in therapeutic doses. 15-20 drops 3 times a day, per os or rectum. Sample sent on request.

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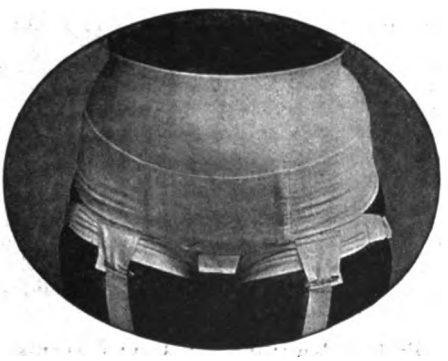
The "Storm" Binder and Abdominal Supporter

(Patented)

Is adapted to use of Men, Women, Children and Babies



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NO WHALEBONES **NO RUBBER ELASTIC**
NO LEATHER **WASHABLE AS UNDERWEAR**

The "Storm" Binder may be used as a **Special** support in cases of prolapsed kidney, stomach, colon, and hernia, especially for ventral and umbilical variety; as a **General** support in pregnancy, obesity and general relaxation; as a **Post Operative** Binder after operation upon the kidney, stomach, bladder, appendix and pelvic organs and after plastic operations and in conditions of irritable bladder to support the weight of the viscera.

Awarded Prize by the Managers of the Woman's Hospital of Philadelphia

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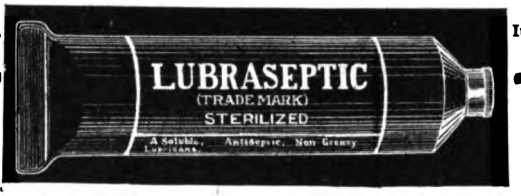
It facilitates the passage of Sounds, Dilators, Bougies etc,



It lubricates the fingers for vaginal and rectal examinations.

LUBRASEPTIC

A non-greasy, non-irritating, odorless, lubricating emollient.

Made from selected Iceland Moss combined with Formaldehyde and Boric Acid

Absolutely sterile and freely soluble in water.

Does Not Stain the Clothing.

The superior care manifested in the manufacture of this product has made for it a place of preference in the estimation of discriminating physicians.

Its Surgical Use

IN GYNECOLOGY—to lubricate, Speculums, Sounds, Irrigators, Dilators, hands, etc. IN GENITO-URINARY WORK—to lubricate Catheters, Sounds, Cystoscopes, Urethroscopes, etc. IN RECTAL SURGERY—to lubricate Colon Tubes, Bougies, Speculums, Irrigators. IN OBSTETRICS—to lubricate the hands and Vaginal Tract, to dress the Umbilical Cord. To anoint the nipples and breast. IN MINOR SURGERY—to lubricate Probes, Directors, to dress cuts, abrasions, burns, etc IN OFFICE WORK—to restore soft rubber or lisle thread Catheters, Bougies, etc., and other webbed tubular articles.

TUBE SENT GRATIS UPON REQUEST. **RUSSELL & LAWRIE, Tarrytown, N. Y.**

RAMSDELL'S SULPHUR CREAM

Has shown results in every case of dandruff.

Excellent remedy when the hair is falling out.

Helps promote the growth and keeps the scalp in healthy condition.

Excellent reports from all Physicians who have used it.

Send for sample and booklet

Ramsdell Drug Company

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CROSS MONOGRAMS

It marks your car as that of a physician's.

It gives you the right of way.

For the welfare of the public it should be on the radiator of your car.

It is a high-grade article in every respect and accords perfectly with the dignity of your profession.

ans are using it. Why not you?

Write for Booklet No. 21 today, now!

THE HICKOK MFG. CO.

42 St. Paul Street ROCHESTER, N. Y.

Current Wit and Humor

Philanthropist—"Er—I sent a poor starving devil down to you with a note this morning to tell you to give him a meal. What's the bill?"

Innkeeper—"Eighteenpence."

Philanthropist—"What are the items?"

Innkeeper—"Four beers and two cigars."—*Sydney Bulletin.*

Tubercular Diseases and Asthma.

Clinical experience shows that Iosaline, a preparation containing alcohol (70 per cent.) combined with iodine, oil of wintergreen and menthol, is highly efficacious applied externally in the treatment of tubercular diseases, all forms of pleuritic pains, Pleurodynia and muscular soreness.

In bronchial and spasmodic asthma it is used successfully to relax spasms and promote expectoration, and in the dry, hacking cough of tuberculosis it has also unquestioned value.

The Iosaline Company, of 563 Broome street, New York, are willing to satisfy our readers as to the merits of this treatment by sending them literature and a sample free, if THE COUNCIL is mentioned.

"Ye didna stop at the Curler's Arms the last time ye cam' up for the huntin', Sir?"

"Quite right; but what makes you so certain?"

"Because yer gaun there this time."—*London Punch.*

Write for interesting working bulletins and other important literature on Vaccines and Antitoxines to Scientific Department of H. K. Mulford Company, 412 South Thirteenth street, Philadelphia, Pa. They will be sent you without charge, if THE COUNCIL is mentioned. The valuable information given therein will amply repay the time taken in studying them.

Perfect Nutritive for Convalescents.

Convalescents require a blood builder to strengthen them. This has at last been found. Bovine is the word. It supplies the lacking essential blood elements. Try it and note the difference apparent in your patients almost immediately. Send for sample and convincing literature, which will be sent you free, if THE COUNCIL is mentioned. Address The Bovinine Company, 75 W. Houston street, New York City.

(Continued one leaf over)

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"The Hall of Science is the Temple of Democracy"

That brilliant historian who died in his prime, crying in his last fever about his unfinished book, wrote many a noble phrase, but nothing truer than this: 'The hall of science is the temple of democracy.' Especially to the science of healing does Buckle's epigram apply, for in the amplitude of its efforts to aid suffering mankind, medicine has ransacked the three kingdoms of nature. Every available substance, whether of mineral, vegetable, or animal origin, which could possibly be utilized as a drug, has been observed and experimented upon.

At the beginning of the nineteenth century, an untutored soap boiler, while washing his kettles with sea-weed discovered Iodin. At the end of the century, a learned woman, while working with pitch-blende, discovered Radium. Then came the Hungarian scientist, Professor A. de Szendeffy, of Budapest, employed both of these valuable elements as a basis and produced a remedy which has no deleterious effects on the human tissue, but destroys even virulent cultures of the Bacillus of Koch.

In Europe, Dioradin is already considered the specific for tuberculosis, and its use is steadily increasing in America. In the treatment of the Great White Plague, Dioradin is the best curative agent known. The numerous cases that have been carefully and scientifically studied and reported, attest its power of transforming consumptives into healthy human beings.

Doctor, if you wish to graduate your tuberculosis patients into the cured list, nothing will aid you so materially as Dioradin.

Sample Ampoule and Literature on Request

DIORADIN COMPANY
Sole Agents for United States and Canada
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A Safe and Dependable Anodyne

Extensive clinical experience by competent observers has conclusively demonstrated that no anodyne or analgesic remedy at the command of the profession is more safe or dependably effective in the control of pain than

PHENALGIN

Given in appropriate dosage in **Alcoholism, Cephalalgia, Dysmenorrhea, Gastro-Intestinal Disorders, Headache, La Grippe, Lumbago, Malaria, Neuralgia, Neurasthenia, Pneumonia, Rheumatism and Gout, Toothache and Other Painful Affections it will afford prompt and positive relief and at the same time leave the physician the practical certainty that he is not suppressing his patients' secretions nor running any danger of inducing a drug habit.**

The fact that thousands of physicians are using PHENALGIN in preference to all other pain relieving remedies is significant of the results it produces.

For Samples or further data, address:

THE ETNA CHEMICAL CO.
708 Washington Street, New York, N.Y.

A CHAIN IS NO STRONGER THAN ITS WEAKEST LINK.

IT IS NOT ENOUGH TO DO THE DIGESTING FOR THE STOMACH, WE SHOULD PROPERLY FEED the DIGESTIVE CELLS in order that THEY MAY DO their OWN WORK.

A MAN IS NO STRONGER THAN HIS STOMACH.

The NUCLEO-ENZYMES FEED THE CELLS and as found in PEPTENZYME MAKES IT DIFFERENT from ALL other DIGESTIVES.

SEE THAT YOUR PRESCRIPTION READS

PEPTENZYME

ACCEPT NO SUBSTITUTE

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SEND FOR SAMPLES & LITERATURE

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Current Wit and Humor

A Dentist's Troubles.

"Well, did he pay you?" asked the wife of a dentist who had been to collect a bill for a full set of false teeth that he had made for a man almost a year before.

"Pay me?" growled the dentist. "Not only did he refuse to pay me, but he actually had the effrontery to gnash at me—with my teeth!"—*Medical Brief.*

Danger in Used Bottles.

Doctor, you take every precaution to prevent infection through ordinary channels, but do you use bottles a second time? If so, are you not reinfecting your patient every time. Think of the danger. New bottles are too cheap to take any chances.

The T. C. Wheaton Company, Millville, N. J., make a special assortment of various-sized bottles in a cabinet for COUNCIL readers. The price is very low, and all dangers are eliminated. See advertisement on another page, and write for information. Mention THE COUNCIL.

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Clinical observations demonstrate Cactina Pillets to be a mild tonic stimulant to the heart, acting both on the mechanism and directly upon the heart muscle. Its continued use will promote cardiac nutrition and overcome atony of the heart muscle. Samples and literature will be sent free to our readers, if THE COUNCIL is mentioned. Address Sultan Drug Company, St. Louis, Mo.

(Continued on leaf over)

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"Expels, without discomfort to the patient, the poisonous toxins that form in the alimentary canal and is of particular value in the treatment of febrile conditions."

Wyeth's

GRANULAR **Salinates** EFFERVESCENT

Supplied in Sealed Bottles Containing 1-4 Lb. and 1 Lb.

PREPARED BY

JOHN WYETH & BROTHER

Incorporated

Manufacturing Pharmacists PHILADELPHIA, PA.

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TYPES OF ANEMIA—No. 11

Tuberculous Anemia,

although dependent upon and secondary to a constitutional infection, should never be entirely ignored. Fresh air, rest and forced feeding are distinctly supplemented by

Pepto-Mangan (Gude)

the one efficient preparation of iron that acts as a genuine blood constructor, without, in the least, disturbing the digestive functions.

In eleven-ounce bottles only. Never sold in bulk.
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Our Bacteriological Wall Chart or our Differential Diagnostic Chart will be sent to any Physician upon application.

ASBESTONE FLOORING You will find it in all the large public buildings, in many churches, in some cathedrals in Europe. Cheaper than the cheapest linoleum. Aseptic. Lasts 20 years. All colors. Millions of feet laid in this country every year at 4 times what we ask. Every operating room should have Asbestone flooring.

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EVERY COAT WE TURN OUT A WINNER

Physicians' Coats for professional use. Made of white or sixty other shades, of washable material. Fast colors. Thoroughly shrunk before making. Made to measure. We pay delivery charges to all parts of the world. Our "Swatch Card" showing material, style and prices free upon request. Dressing Gowns. Smoking Jackets. Bath Robes and Hospital Uniforms a specialty.

WEISSFELD BROS., 115 L. L. Nassau St., New York

Manufacturers of Physicians' Coats. The Kind They All Admire.

Current Wit and Humor

"Ah say, Miz Mandy, am yo' program full?"

"Lordee, no, Mr. Lumley. It takes mo' an a san'wich an' two olives to fill mah program."—*The Coyote.*

Bloodless Phlebotomy.

Now is the time to remember the merits of Antiphlogistine in all congestive conditions. It "bleeds but saves the blood." Better be posted on its use; it will mean much to your patients. Send for sample and complete literature. Address Denver Chemical Manufacturing Company, 57 Laight street, New York City. Mention THE COUNCIL.

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The Complainant—"I should say I can! Whenever he had anything to say to me he'd call me up on the telephone and say it, and then disconnect before I had a chance to talk back to him."—*Chicago News.*

Doctor, you are aware of the importance of keeping careful record of your patient's variations in weight. The gain or loss in weight is often an important index of your patient's condition. You should not have to depend on guesses, you should KNOW. A Jones Scale in your office will give you this information at all times, and besides adds to the professional appearance. Jones makes a very special proposition to our readers. Mention THE COUNCIL and address Jones, 5 Bee street, Binghamton, N. Y.

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When prescribing an intestinal eliminant, remember Wyeth's Salinate. It expels the poisonous toxins that form in the alimentary canal without discomfort. Samples and literature will be sent you, if THE COUNCIL is mentioned. Address John Wyeth & Bro., Eleventh street and Washington avenue, Philadelphia, Pa.

Editor—"We are sorry to lose your subscription, Mr. Jackson. What's the matter? Don't you like our politics?"

Mistah Jackson—"'Tain't dat, sah; 'tain't dat. Mah wife jes' been an' dun landed a job o' wuk foh me by advertisin' in youh darned old papah."

(*Continued on page xxxii*)

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4-ounce.

IN THE SICK ROOM

To be familiar with the value of a remedy from a therapeutic standpoint would seem all that was necessary, but an acquaintance with its physical appearance is quite as important as a partial protection against imposition from substitution.

The reputation of H. V. C. has been so well established as a trustworthy remedy in the treatment of DYSMENORRHEA, AMENORRHEA, METRORRHAGIA, MENORRHAGIA, THREATENED ABORTION, etc., that to write a prescription of four, ten or sixteen ounces of

Hayden's Viburnum Compound

SEEMS SUFFICIENT

16-ounce.

As an assurance of dependable results, however, it is suggested that the article, as delivered to the sick room, be examined by the attending physician to determine that it is the genuine H. V. C., as originated by Dr. Wm. R. Hayden, and not a worthless imitation.

To any doctor not familiar with the results following the administration of the original H. V. C., samples, formula and literature will be sent upon receipt of card.

SUGGESTION: Always mix **Hayden's Viburnum Compound** in boiling water, and drink as hot as possible.

NEW YORK PHARMACEUTICAL CO, Bedford Springs, BEDFORD, MASS.

In Rheumatism and Gouty Disorders, HAYDEN'S URIC SOLVENT has proven of inestimable value.

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The Boardwalk, the beach, the piers and other attractions, when combined with the comfort and elegance of Chalfonte, make a visit to

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at this time most delightful. Write for reservations to

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ALWAYS OPEN **ON THE BEACH**

DRS. PETTEY & WALLACE'S SANITARIUM

958 S. Fourth Street **MEMPHIS, TENN.**

FOR THE TREATMENT OF

Alcohol and Drug Addictions
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A quiet, home-like, private, high-class institution. Licensed. Strictly ethical. Complete equipment. New building. Best accommodations.

Resident physician and trained nurses.

Drug patients treated by Dr. Pettey's original method under his personal care.

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$C_6H_{12}N_4$

is a genito-urinary antiseptic and germicide, which, given internally, becomes active from the kidney glomeruli to the meatus urinarius, impregnates the urine with formaldehyde, neutralizes ammonia, prevents decomposition, clears urine of mucous, but does not irritate or poison.

CYSTOGEN

($C_6H_{12}N_4$)

is effective in Cystitis, Pyelitis, Ureteral Inflammation, Calculus, Gonorrhea, Urethritis, etc.

DOSE—5 grains, three or four times per day, largely diluted with water.

Samples and literature on request.

Supplied as

Cystogen—Crystalline Powder.
Cystogen—5 grain Tablets.
Cystogen-Lithia (Effervescent Tablets).
Cystogen-Aperient (Granular Effervescent Salt with Sodium Phosphate).

CYSTOGEN CHEMICAL CO.
515 Olive St., St. Louis, U. S. A.

Anasarcin

Oxydendron Arboreum (Sour Wood)
Sambucus Canadensis (Elder)
and Urginea Scilla (Squill)

Eliminates Effused Serum

Controls heart action and restores physiological balance between arterial and venous systems.

Thousands of Physicians

are continually using *Anasarcin* with most gratifying results in all *dropsical effusions* whether caused by disease of the heart, liver or kidneys.

TRY

Anasarcin

in any obstinate case of Dropsy—then judge its merits.

Clinical results prove Therapeutics.

Trial quantity and literature on request *to physicians only.*

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7. **Causes and Treatment of Baldness.** This series of papers, by a man who has been successful in the treatment of baldness, will give information that will produce results.

All of these papers will be practical and concise, written with the purpose of giving information that the general practitioner will find valuable in his daily practice.

Doctor, these are only preliminary plans and will be much added to as we go along. We will announce in the January number many good things for the coming year that we are now at work on.

Our Place.

Doctor, we are endeavoring to fill one particular need in Medical Journalism, to make for ourselves one particular place. *That place is this:* the compact, practical, to-the-point journal that is of value to the General Family Practitioner in his every day practice.

We point with pride to the work done by the MEDICAL COUNCIL during 1911. Taking a careful view of the subjects treated and the articles placed before our readers, we feel confident that no other medical journal in this country has so completely filled the mission of a faithful adviser, intelligent guide and genuine helper to the busy general practitioner in all parts of the field. Letters of commendation from physicians in every county in the Union—and several thousand new subscribers—sustain us in this belief.

1912 Better Than Ever Before.

Yet our ambition is not satisfied. We see where we can improve in almost every department, and take even higher ground as a leader in professional ideals and practical information than has ever yet been done by any medical journal—and we propose to move on until we occupy that highest ground that can be reached. In this we ask the hearty co-operation of our readers.

We shall continually give to our readers the very best of the new medical and surgical information that is *really true.* That which is doubtful we shall treat as doubtful regardless of the authority, and that which is fallacious we shall expose.

The Business Side of Medical Practice.

Our plans for 1912 will make this department more valuable even than ever before.

This part of the MEDICAL COUNCIL is to give the physician, in as compact compass as possible, those things that make for his financial well-being.

To keep him posted on the latest advances in the Science of Collecting Accounts.

To advise the physician what investments are safe and what are unsafe.

More than this, to advise the physician what forms of investment will bring him in contact with his neighbors, put him more prominently before his community, increasing his acquaintance, practice and prosperity.

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To advise the physician in legitimate ways of extending his practice.

To fight those things which are making inroads into the General Family Practitioner's livelihood, the use of the free dispensary by those well able to pay, the lodge system of practice, contract practice, the over remuneration of the specialist at the expense of the average General Practitioner, etc,

Your Renewal.

The more *good* medical journals you read the more you will prosper. It is the best investment of time and money you can make. Be careful to pick the *good* ones and employ your reading time to the very best advantage.

Among the many good things to appear in the January COUNCIL are:

"A Review of Medical Progress during the year 1911," by the entire Editorial staff of the COUNCIL.

"Vaccines in General Practice," by Dr. J. H. Mudgett.

"Ifs for the Country Doctor," by Dr. W. R. Judd.

"The Treatment of Infantile Paralysis. Recent Suggestions," by Dr. Adelaide W. Peckham.

"Fununculosis, Boils, and Carbuncles," by Dr. C. A. Button.

"Chronic Urethritis," by Dr. W. H. Baldwin.

"The Recent Clinical Congress of Surgeons," editorial.

"The Open Treatment of Fractures: Its Many Dangers."

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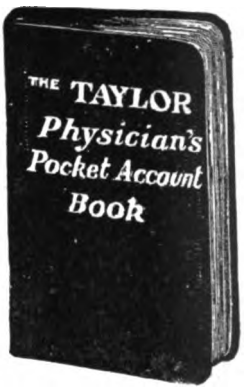

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This is a full-size, exact SAMPLE PAGE with entries filled in:

136 ACCOUNT OF PROFESSIONAL SERVICES RENDERED

For Mr. JOHN DOE AND FAMILY

Address 7077 Hazel Avenue

1910 Mo.	Day	Person to whom Services Rendered	Description of Services	Dr		Cr.	
Jan.	3	Son, Robert	Night Call	3	00		
Feb.	2	Daughter, Eva	2 Calls	4	00		
"	18	Mr, Doe	Office Call	1	00		
Mar.	1		Paid Cash			5	00
May	3	Wife	Confinement	25	00		
"	25		Paid Check			20	00
June	21	Baby	Call $2.00; Medicine, 75c.	2	75		
"	'	Wife	Examination and Treatment	5	00		
July	17	Son, John	Operation, Adenoids	25	00		
"	30	Servant	Opened Felon	3	00		
"	31		Treatment	1	00		
Aug.	1		Paid Cash			30	00

(There are 18 more lines on the page which we haven't room to show)

Directions for Using At the top of the page the name and address of the person to whom the services are rendered and from whom the account is due are entered (in this case Mr. John Doe and family, 7077 Hazel avenue). Under the headings at the top of the columns complete information regarding the service is entered (at the time the service is made, constituting an indisputable original entry), as follows: On Jan. 3d (entered under "Mo. Day"), a night call (entered under "Description of Services") has been made for Mr. Doe's son, Robert (entered under "Person to whom Services Rendered"), charge $3.00 (entered under "Dr."). In this way all entries are made, the date being given, the person attended named—Daughter Eva, Mr. Doe, Wife, Baby, Servant, etc.; the service described—Office call, Confinement, etc., and the proper charge entered. When a payment is made, the date is entered—Paid check, or Paid cash, written across page and the amount entered under "Cr." To make complete statement of account add up amounts under "Dr.," add up amounts under "Cr.," and subtract, and that gives the balance still remaining due.

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MAKES COLLECTIONS EASIER—Your accounts are always up to date in your pocket. Whenever a patient asks for a statement you can give it to him and get the money right there. You don't have to say, "I will have to fix up your account at the office and send you a bill." By being prepared with the TAYLOR ACCOUNT BOOK you will get many a payment which you would otherwise miss or have to wait and wait for.

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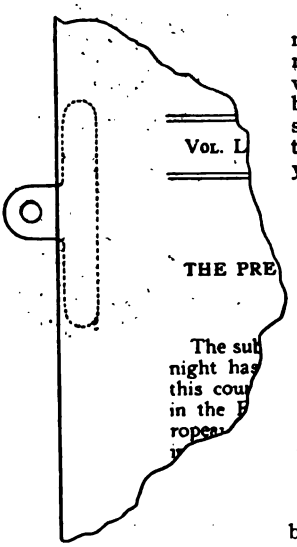

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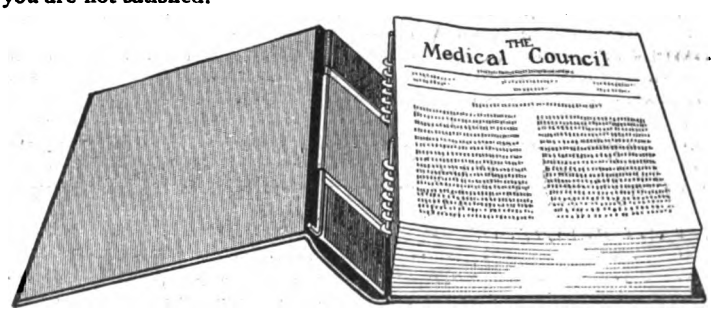

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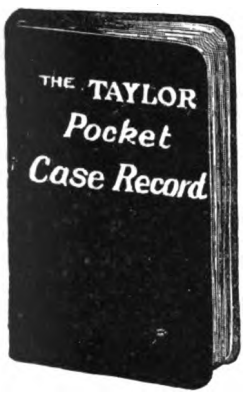

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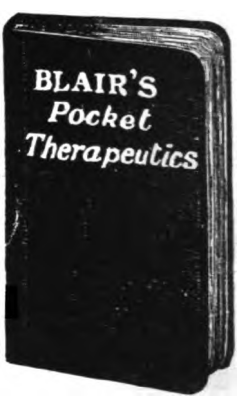

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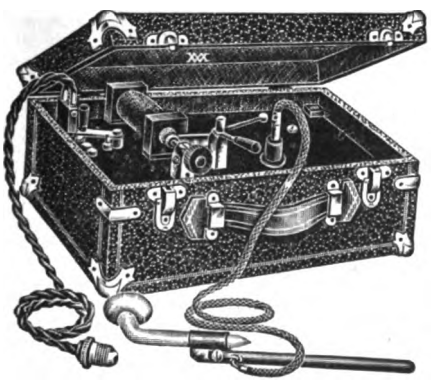

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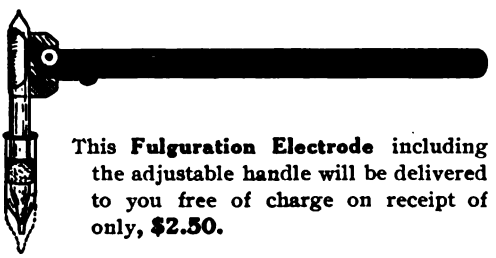

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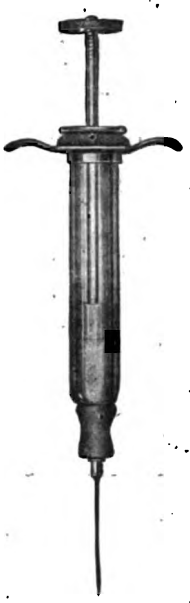
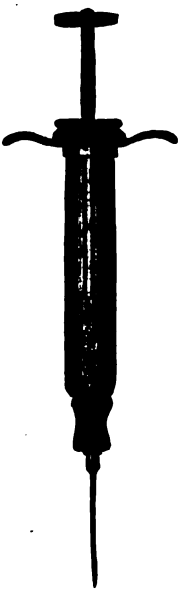


Early Administration
OF
Antitoxin Important



At the Philadelphia Hospital for Contagious Diseases, from 1904 to 1910, Antitoxin was administered to 256 diphtheria patients on the FIRST day of the disease; ALL recovered.

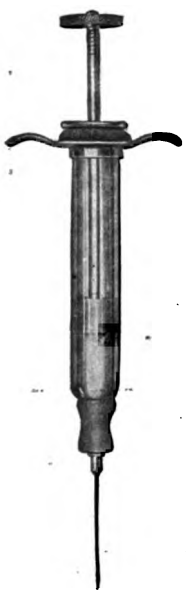
THE importance of the early administration of DIPHTHERIA ANTITOXIN is further emphasized by Dr. Joseph S. Neff, Director of Public Health and Charities of Philadelphia, as follows:

Every Dose in Sterile Glass Syringe

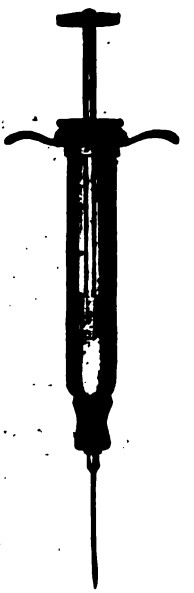
"Anyone skeptical as to the results obtained is asked to visit the Philadelphia Hospital for Contagious Diseases for an examination of the records, which will demonstrate beyond doubt the wonderful saving of life when Antitoxin is administered early in the disease.

"The mortality among cases treated on the second day has never exceeded 5.4 per cent, while it was much higher among those treated on and after the third day of the disease."—*Official Bulletins, Department of Public Health and Charities, Philadelphia.*

Every Dose in Sterile Glass Syringe



The
Mulford Diphtheria Antitoxin heads the list everywhere



It meets every test for efficiency, for concentration, for convenience in administration, and can be supplied by every reliable pharmacist.

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holds its eminent place among sedatives and soporifics by reason of its marked potency and freedom from untoward effects. It is superior to chloral and the bromides in remedial results and has none of their notoriously distressing effects.

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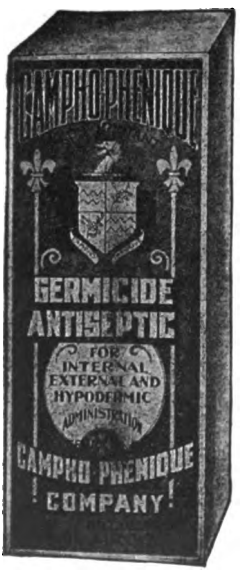
HEMORRHOIDS, BOILS, FELONS, CARBUNCLES

Excellent results will follow its use in these cases



HEMORRHOIDS—In cases of hemorrhoids, CAMPHO-PHÉNIQUE can be used with success by the hypodermic administration of three to five drops into each hemorrhoid. It has a tendency to abort and cleanse the wound of all foreign matter, and to aid the healing process.

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"What makes you scratch your head?"

"Because, I'm the only one that knows it itches," he replied quickly.

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In everyone the spine is more or less jarred walking, etc. This is one of the causes of exha... and nervousness. Overcome it by using O'Sullivan Rubber Heels on your shoes. They are made of pure, live rubber, which takes up all the jar. Send for information to O'Sullivan Rubber Company, 131 Hudson street, New York City. Mention THE COUNCIL.

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The Last Pitfall of Pneumonia

even though the acute stage of pneumonia is weeks past, the patient has not yet reached the zone of safety, for in his convalescence, tissue weakness and loss of bodily vigor make him an easy prey to tuberculosis—the last pitfall of pneumonia. TO PROTECT THE CONVALESCENT—TO INCREASE HIS POWERS OF RESISTANCE—TO GUARD HIM FROM THIS PITFALL IS ONE OF THE GREAT PURPOSES OF

Its employment after pneumonia is as logically routine as the use of quinine in malaria or mercury in syphilis.

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is a gentle but certain stimulant to the hepatic functions and overcomes suppressed biliary secretions. It is particularly indicated in the treatment of Biliousness, Jaundice, Constipation and all conditions caused by hepatic torpor.

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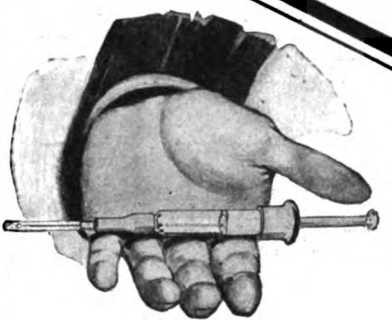

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The Duke of Villiers was famous for his hard-heartedness. When it was reported that he suffered from symptoms of stone, Piron remarked: "His heart must have fallen into his bladder."—*Medical Brief.*

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Edward, the colored butler of a lady in Washington, had recommended his mother for the position of cook, but when the applicant came the lady noticed that she was not very strong-looking.

"Do you suppose you will be able to do the work, Auntie? You don't look very healthy."

"Yes, ma'am, I is able; I ain't nuvver been no ways sickly in my life—ain't nuvver had nothin' but small-pox an' Edward."

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The secret of success in using Burnham's Soluble Iodine in septic conditions, is to give it in heavy doses at frequent intervals until temperature recedes. The dose must be large enough to overcome the toxin in the system and until that point is reached no fear need be felt of giving too large a dose. As soon as temperature begins to drop, diminish dose.

Some of the worst cases known have responded to this treatment; in from 12 to 24 hours and ultimate cures have been effected.

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"He was driven to his grave!"

"Sure he was. Did you expect him to walk there?"—*Pittsburgh Observer.*

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"individuality is nowhere more forcibly marked than among pharmaceutical remedies.

While one product may resemble another in color, name and formula, to its uniformity of therapeutic action depends its individuality. This feature which has so universally characterized antiphlogistine has made it the choice of the medical profession.

At this season, when Laryngitis, Pharyngitis, Tonsillitis, Bronchitis, Pleuritis and other diseases of the throat and chest are so prevalent, a dependable remedy to relieve the inflamed and congested tissues, as well as to inhibit the extension of the disease is most desirable.

Antiphlogistine applied thick and hot, well protected by suitable covering, will retain its heat for hours, reduce the inflammation and afford prompt and unmeasureable relief to the patient.

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THE QUICK WAY TO THE GRAVE

IS MOST EASILY AND RAPIDLY CONTROLLED BY THE USE OF THE

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EVERY PHYSICIAN knows that pneumonia is a serious *infection;* and many have found out that Wright's vaccine method of treatment is the most sensible *curative* procedure known to medical science. ¶ It is a great advance over the older measures.

GIVE *YOUR* PATIENTS the benefit of the best there is—use Sherman's Combination Vaccine **"Q"**

Pneumococcus 30,000,000}
Streptococcus 20,000,000} in 1 c.c.

as an ***adjunct*** measure in one case and you'll never attempt the treatment of pneumonia without it.

Write for some mighty interesting literature

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Express prepaid, In Leather, $4.00

Send measure of leg from top of knee-cap to bottom of heel and girth of calf over trousers. ☞ If the leggings do not satisfy you, return them to us in good condition, and we will refund your money. Literature on request.

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Don't overlook the value of Unguentine Cones in the treatment of this distressing affection; especially in internal hemmorhoids. Their use quickly relieves, as the experiences of many physicians show. Better write for samples and literature, which will be sent you, if THE COUNCIL is mentioned, and try them in your next case. You will be pleased with results. Address Norwich Pharmacal Company, Norwick, N. Y.

O'Hara once saw an advertisement in a street car reading: "Buy your stove at O'Brien's and save half your coal."

"Begorra," he said, "I'll buy two stoves and save all me coal."—*Town and Country.*

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Sterilized Bottles

DOCTOR, don't run the risk of using old second-hand bottles, to which may be attached hidden particles of unclean or poisonous substances. Use clean new ware, and your reward will be in a clear conscience and a perfect action of your prescription.

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12 dozen 2-dram Homeo Vials
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4 dozen 2-ounce Ovals
3 dozen 3-ounce Ovals
6 dozen 4-ounce Ovals
1 dozen 6-ounce Ovals
1 dozen 8-ounce Ovals
30 dozen Fine Corks

at a cost of five dollars.

These bottles are sterilized and all have their cork ready for dispensing, and being packed in paper are about free of breakage, and cost you, complete less than a cent and a half apiece.

Will it pay to use bottles from the dump, of unknown history, against our new sterilized glass at this cost?

This cabinet is securely packed and delivered to the railroad station here upon receipt of a five-dollar bill or post-office money order of even amount.

T. C. WHEATON CO.
Expert Bottle Blowers **Millville, N. J.**

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"For two years Mrs. ——, aged 48, has suffered severely from articular rheumatism in her hands and feet, though nearly all her joints, and at times even her muscles, where more or less involved. Her finger joints were much enlarged, and for the past year a severe pain ran from her left ring-finger up her arm and under her shoulder blade, causing her many sleepless nights. A-f-sal, 80 grains a day, relieved the pain in her hands in three days, and now for several weeks her hands have been practically free from pain and soreness and the swellings of her finger joints are much less."—Dr. C. W. Brown, Orland, Maine.

"The many and frequent reports of rapid cures of gout and rheumatism prove the worth of A-f-sal when used in liberal doses. The value of A-f-sal appears to be in the arrangement of its molecules, establishing a toleration by the system for its prolonged use without detriment to the organism."—*Editor Medical Summary,* November, 1911.—For further information, etc., address The Organic Chemical Manufacturing Company, Fort Washington, Pa.

Who's Loony Now?

"This division of the women's ward," said the asylum guide, "was made necessary by the new style in skirts."

Looking in, the visitors saw a number of women in queer, bifurcated garments parading up and down the room.

"These patients," contiued the attendant, "we call our pantalunatics."—*Lippincott's.*

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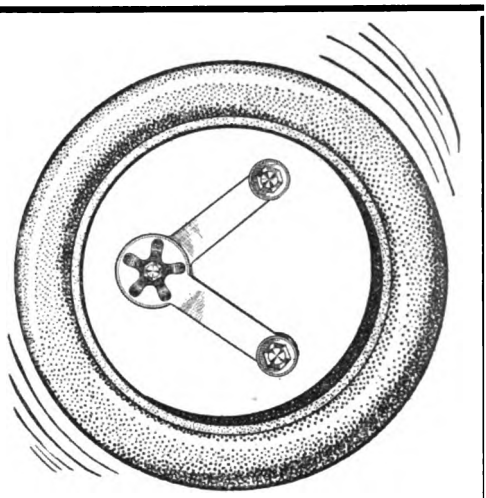

Here's *real* Tire Protection

Tires perish as the result, not of use—but abuse. The present deplorable condition of roads makes it impossible for any tire to last long. Every road rut or bump throws the wheels of the car off the ground and on their return the tires are torn and cut.

If you provide against these leaps in the air by a suitable control to your car's springs, you cut down the largest single item of upkeep—your tire cost. The

Truffault-Hartford
SHOCK ABSORBER

controls both the contraction and rebound of your car's springs so that, under the most trying conditions of travel, your springs are working normally and the wheels are kept where they belong—on the ground.

Besides multiplying the value of your tires, Truffault-Hartfords lessen the wear and tear on the engine and parts. For the vibration that follows these uncontrolled rebounds not only destroys your comfort, but will eventually loosen every bolt and screw and bring infinite harm to the more delicate mechanism.

Truffault-Hartfords eliminate vibration—make your car comfortable—saves you money on repairs—permit greater speed if desired.

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If you have a car weighing under 1200 lbs., as for instance the Hupmobile, AA Maxwell, etc., this device will give you adequate protection against rough roads. It is capable of the same all 'round efficiency as our larger models and built with the same care and skill from the same excellent materials. $15.00 per set of four.

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It is essential, to successfully withstand the ravages of disease, that the vitality be augmented. The winter season is especially hard on your patients with reduced vitality, hence it is most advisable that they be built up quickly as possible. Nutromul will do this. It quickly restores lowered vitality and makes the patient resistent to encroachment of disease. Try it, Doctor, in your practice. Sample and convincing literature are yours for the asking, if THE COUNCIL is mentioned. Address Nottoc Laboratories, Atlanta, Ga.

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This can be avoided or overcome by using Aletris Cordial (Rio). This reliable utero-ovarian sedative has repeatedly proven an effective means of arresting premature labor. You should have a supply in your obstetric bag, Doctor. Send for full information. Address The Rio Chemical Company, 79 Barrow street, New York City, mentioning THE COUNCIL.

A Scientist.

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Willie—"Sure—it's water gone crazy with the heat."—*News.*

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These diseases, for they *are* diseases, can be best treated away from home influences and sympathy. Send these patients to a modern and reliable sanitarium. Send them to the Petty & Wallace Sanitarium, where they will have the benefit of most scientific treatment. Dr. Petty is an authority on these diseases whom you can safely trust. Write him for information. Address Drs. Petty & Wallace Sanitarium, 958 South Fourth street, Memphis, Tenn. Mention THE COUNCIL.

Dry Parson—"Well, Sam, I notice that the colored citizens are wearing shoes more frequently since the saloons were voted out of town!"

Sam—"Yassir, dere's so many pieces of bottles a layin' roun' now, taint safe to go ba-foot no mo!"

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By scientific treatment this condition can be overcome. The way to do it is by using Regulin. The daily use of Regulin as an addition to the food prevents autointoxication and the host of ills traceable thereto. Samples and literature sent you free, if THE COUNCIL is mentioned. Address Reinschild Chemical Company, 71 Barclay street, New York City.

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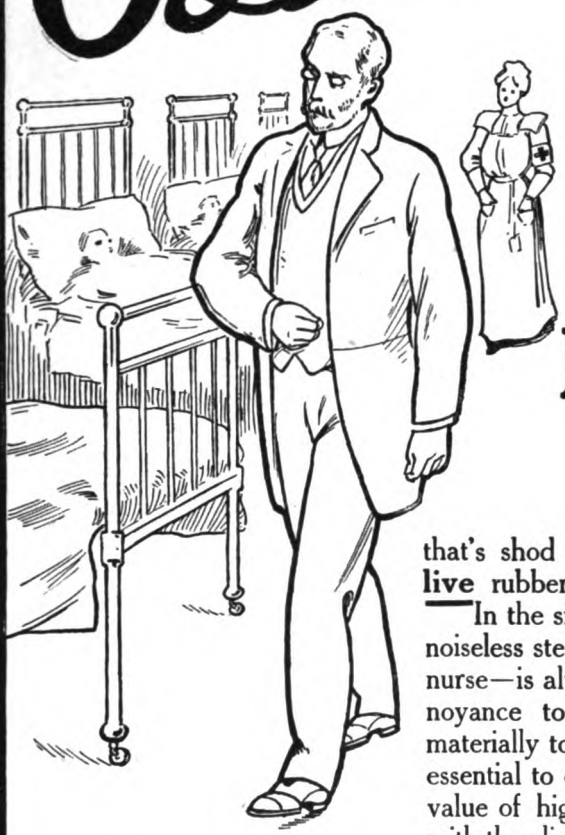

Lightly falls the Foot

that's shod with an **O'Sullivan Heel** of new **live** rubber."

In the sick room or hospital ward, the light, noiseless step of the conscientious physician—or nurse—is always grateful, since it saves infinite annoyance to sensitive patients and contributes materially to the calm and quiet that is often so essential to convalescence and recovery. But the value of high-grade rubber heels does not stop with the elimination of needless noise. Experience has further shown that their use not only decreases fatigue, but by reducing the jar occasioned by walking on hard floors, pavements and side walks, avoids the otherwise inevitable shock to the sensitive spinal structures.

There is, therefore, a sound scientific principle back of the use of rubber heels. Medical men have been quick to recognize their hygienic advantages and it is rare to find a painstaking physician to-day who does not use and recommend rubber heels.

It is needless to go into detail concerning the superiority of **O'Sullivan's Rubber Heels,** for their quality, wearing value and remarkable resiliency are matters of common knowledge; made from the highest grade of new **live** rubber they are to countless people an indispensable aid in the promotion of comfort, the prevention of fatigue and the preservation of health.

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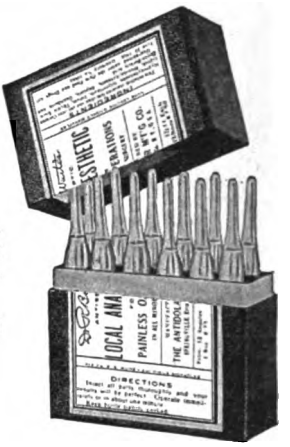
If You Will Use

DR. R. B. WAITE'S ANTISEPTIC LOCAL ANAESTHETIC

For All Minor Surgical Operations

The percentage of Iodum (Iodine), contained in Dr. R. B. Waite's Local Anaesthetic insures you against the possibility of sore tissues, because Iodine is an Antiseptic of Marked Potency. It is far superior to bi-chloride of mercury and only one-fourth as toxic. It does not coagulate albumen. It is very penetrating and effective in a very brief time. It is the safest and most potent of all known antiseptics. It does not damage the tissues, but on the contrary, acts the part of a useful tissue stimulant.



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therefore, when using Dr. R. B. Waite's Antiseptic Local Anaesthetic, for you always get the same perfect results, which we will prove to your perfect satisfaction, if you will allow us to send you

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Teddy's mother had been taken suddenly ill one morning while he was at school. On his return, he was admitted to his mother's room for a few minutes, and found his Aunt Alicia sitting by the bed.

"Now, Teddy," said she, "Mother has been very ill, and must not talk."

"Oh, my! I'm sorry, Mother," gasped Teddy.

Mother smiled at him lovingly.

Master Teddy seated himself on a large chair directly opposite, and, after wriggling anxiously around for a minute or two, delivered himself of the following speech.

"Mother dear—now don't try to speak—but if you mean yes, nod your head—this way—and if you mean no, shake your head—this way. *Have you seen my baseball bat?*"—*Margaret G. Hays.*

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You have often wished for a more powerful antiseptic, without dangerous qualities. It's here now. Chinosol is stronger than Carbolic Acid or Bichloride, and yet *is not poisonous.* It's a fine antiseptic. Get acquainted with it, Doctor. Literature and clinical reports for the asking. Mention THE COUNCIL and address Chinosol Company, 54 South street, New York City.

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Doctor, are you familiar with vaccine therapy? This modern method of treatment has assumed very large proportions, and should be carefully studied by all. Write for exceedingly interesting literature to Dr. G. H. Sherman, 427 St. Aubin avenue, Detroit, Mich, mentioning THE COUNCIL. Dr. Sherman is a pioneer in vaccine therapy and his practical experience is bound to be of much value to physicains.

"In the Cumberland mountains, of East Tennessee," the Honorable "Bob" Taylor says, "a good coon-dog is considered a valuable asset.

"A visitor once asked a native, Bill Simon, how many dogs he had.

"'I ain't got but five,' said Bill, dejectedly. 'Looks like I never kin git a start on dogs agin.'"

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In cystitis, prostatitis, visical catarrh, urethritis, pyelitis, etc., the remedy *par excellence* is Cysto-Sedative. Clinical reports speak very highly of it. Formula, literature, and liberal sample will be sent you free if THE COUNCIL is mentioned. Address Strong-Cobb & Co., Cleveland, O.

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It should be made a routine practice to insist that grip convalescents take a tissue food, such as Cord. Ext. Ol. Morrhuae Comp. (Hagee). If this is done the complications and sequelæ of this infection will not be met so frequently. Cord. Ext. Ol. Morrhuae Comp. (Hagee) contains the very elements the drained system needs to restore it to health and vigor, the contained extractives of the cod liver oil, coupled with the hypophosphites of lime and sodium, supplying this need in admirable manner.

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Pabst Extract American Girl Calendar 1912

The Pabst Extract American Girl Calendar for 1912 is an art creation worthy of more than passing notice.

The subtle charm of outdoor life, the captivating beauty of the typical American girl and the artist's masterful portrayal of man's best friend—the horse—combine to make a picture that will instantly appeal to every lover of the artistic and beautiful.

In panel form, seven inches wide and thirty-six inches long and printed in twelve delicately blended colors, this Pabst Extract American Girl Calendar will harmonize well with the furnishings of any room, home, den or office.

No advertising matter whatever, not even the title nor the months, are printed on the front.

Scores of calendars, far less artistic, are sold every year at 75c to $2.00 each, but *we send you this calendar free,* hoping it will serve to remind you that

Pabst Extract
The "Best" Tonic

strengthens the weak and builds up the overworked—relieves insomnia and conquers dyspepsia—helps the anaemic and turns nerve exhaustion into active, healthy vim—encourages listless convalescence to rapid recovery—assists nursing mothers and reinvigorates old age

The U. S. Government specifically classifies Pabst Extract as an article of medicine—not an alcoholic beverage

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Write It "Pabst" in the Prescription

This Calendar is Free to Physicians

Simply write us on your professional letter head and one of these beautiful calendars will at once be sent you without charge.

PABST EXTRACT CO. Dept. 44 Milwaukee, Wis

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Every Doctor should have a scale where he can find at once the exact physical condition of any patient and by frequent comparison keep himself posted as to changes. Careful diagnosis demands full knowledge of actual weight.

Any Doctor east of the Rocky Mountains, who has confidence enough in my nearly fifty years business' career, by sending me $16.00 can have one of the Bertillion Scales delivered free at his R.R. Sta; or, if he wants to examine one before paying, he may pay $17.00 after 30 days trial. Full information if you write. The scale has a capacity of 400 lbs. by 1-4.

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Tested professionally—
Approved professionally.

Exceptionally Palatable, Digestible, Dependable.

Physicians have been able to prescribe to advantage

Hydroleine

in cases in which cod-liver oil is indicated. Hydroleine is pure Norwegian cod-liver oil emulsified in a manner which makes it extremely utilizable. It is without medicinal admixture. Sold by druggists.

THE CHARLES N. CRITTENTON CO.
115 Fulton Street, New York
Sample will be sent to physicians on request.

Current Wit and Humor

Its Place of Business.

"In the absence of any accurate information the imagination of our pupils sometimes takes a curiously amusing turn," says an instructor in a Philadelphia institution.

"The boy who defined a mountain range as a 'large-sized cook-stove' was recently eclipsed by the answer returned by a lad from Altoona.

"What is the office of the gastric juice?' was the question put to this boy.

"His written response, no doubt struck off in the hurry of the examination, was: 'The stomach.'"—*Fenimore Martin.*

DUST CARRIES IT.

Infantile Paralysis Transmission Investigated by Physicians.

In a paper read by Dr. Neustaedter before the neurological division of the Academy of Medicine, he explains a series of experiments conducted in conjunction with Dr. William Thro, of the Cornell Medical College, for the purpose of determining the manner of the spread of infantile paralysis.

As a basis for his experiments, Dr. Neustaedter adopted the hypothesis that infantile paralysis is a dust disease, contracted by children coming in contact with or breathing in the dust of any room infected with paralytic germs. During March Dr. Neustaedter and Dr. Thro collected the sweepings from rooms in which there were nineteen cases of infantile paralysis of from three to six months' standing. These sweepings were dried, sifted, macerated and dissolved in a normal salt solution The resulting solution was injected into the brains of six monkeys reserved for the experiment.

Five of the monkeys showed prominent symptoms of paresis, in some cases paralysis being complete. The physicians present agreed that the monkeys were undoubtedly paralytic and that an important chapter had been added to the medical knowledge of the disease.

In the light of recent scientific research the dangers of dust as an ever-ready vehicle for the spreading of disease germs are attracting more and more attention among medical men everywhere.

In this connection the value of Standard Floor Dressing as a dust preventive is receiving wide recognition. Standard Floor Dressing is a mineral preparation manufactured by the Standard Oil Company, and is notably effective in catching all dust the instant it settles on the floor and holding it there until it is swept away. It prevents the dust from rising again and circulating in the air, thus keeping furniture and fixtures clean and fresh in addition to its high hygienic value. Full particulars as to the use, etc., of Standard Floor Dressing can be obtained on application to any agency of the Standard Oil Company.

Welch Grape Juice Plant Enlarged.

We have been advised that the Welch Grape Juice Co., of Westfield, N. Y., has purchased at a receiver's sale the plant of the Grape Products Co. This gives the Welch Co. much needed fa-

(Continued one leaf over)

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SPECIFIC SKIN AFFECTIONS

"I HAVE had remarkable success in the treatment of tertiary syphilitic eruptions and ulcerations with RESINOL OINTMENT," writes a prominent eastern physician. Continuing, he says, "With its aid I healed an extensive ulceration of the skin covering the whole right side of the nose. This case had resisted all of the usual remedies."

RESINOL OINTMENT is not disappointing, but on the other hand brings results in all eruptions of the skin, whether specific or innocent. It is a most excellent healing dressing for skin ulcerations, including syphilitic, varicose, or those resulting from deep burns.

RESINOL OINTMENT will relieve the nerve-racking irritation of Pruritus Ani, or an infected Proctitis, quicker than anything else. This ointment contains no mercury, but combines readily with citrine and other of the mercurial ointments. It forms an excellent healing ointment base, in which any of the salts of mercury can be incorporated.

RESINOL SOAP should be recommended for bathing all infected parts, or those exposed to infection.

This excellent antiseptic also forms the basis of the medication in the **RESINOL MEDICATED SHAVING STICK,** the utility of which is obvious.

RESINOL CHEMICAL COMPANY

Send for samples ***BALTIMORE, MD.***

Welch's
Grape Juice

THE CONCORD grape has more food value than any other. The Chautauqua Concord grape has more food value than any other Concord.

WE pay a bonus over the market price and get the choicest clusters grown in the entire Chautauqua belt.

No human hand touches those grapes after they are picked. Washing, stemming, pressing, sterilizing and bottling the juice is entirely mechanical and absolutely clean.

The result: The full nutrient value of the richest and best Chautauqua Concords—the grape sugar, gluten, mineral salts and fruit acids in readily assimilable form is found in WELCH'S GRAPE JUICE.

ALSO, our process leaves in the juice all the properties, aroma and flavor of the fresh fruit.

Physicians prescribe WELCH'S with gratifying effect as a sustaining diet for the sick, a nutrient tonic for the convalescent and an alterative and health-giving beverage for the well.

Sold by leading dealers everywhere. 4-oz. bottle mailed for 6c. Sample pint bottle, express prepaid, 25c. Literature of interest to physicians free of charge.

THE WELCH GRAPE JUICE CO., Westfield, N. Y.

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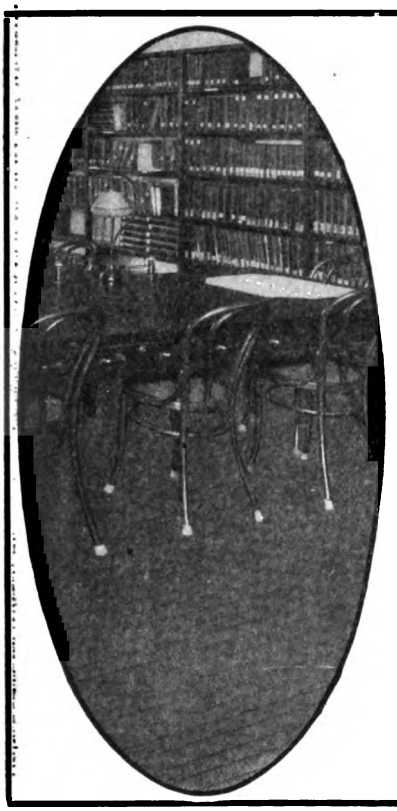

STANDARD Floor Dressing

Prevents Circulation of Dust and Germs

Wherever many persons come together, there are quantities of dust floating in the air, stirred up by the movement of many feet.

Science has proved dust is a favorite nesting place for disease germs.

It follows that at every breath there is danger of infection from the germs inhaled with the floating dust.

Standard Floor Dressing catches all dust the instant it settles on the floor and holds it there. At the end of the day dust and germs are easily swept away without again rising into the air.

Not Intended for Household Use

Our free illustrated booklet contains information of special value to all who are in a position to promote hygienic conditions. Write for it to-day.

Standard Oil Company
(Incorporated)

Gonosan In Cystitis and Gonorrhoea

The Post Graduate, 1907, p. 1242, says:—

"NEISSER'S own experience leads him to prefer Gonosan and the solution of the burning question with regard to the internal treatment of gonorrhoea is very effectively aided by the testimonial from one who must be regarded as a discoverer and leader in the domain of the pathology and therapeutics of this disease, and this opinion may be added to that announced by over one hundred physicians with regard to the value of Gonosan, the consensus of which is that Gonosan alleviates the severe burning pain and the severe erections."—"In vesical irritation Gonosan acts as a sedative to the nerves of the bladder and at once relieves the annoying dysuria."—It prevents an extension to the inflammatory process to the posteria urethra"—"Gonosan is better tolerated than any other of the balsamics."—"It does not disturb the stomach, it is taken without objection, it is not nauseating and does not produce renal irritation."

ACCORDING to Bandler (*Medical Gynecology*, p. 288, 1909). "The fluid extract of kava-kava, ½ dram three times a day, is highly comforting especially in gonorrhoeal cystitis. In the latter stages we may use t. i. d. Gonosan capsules which contain 20% of kava, and 80% of sandalwood oil." In another place, he says:—"Gonosan is an oleagino substance soluble in ether, alcohol, or chloroform. It is the active principal of kava-kava dissolved in sandalwood oil—Kava renders mucous membranes ischemic and anesthetic.—It lessens secretion, checks the growth of gonococci, is a diuretic, and prevents pain." p. 396.

GONOSAN is supplied by **Riedel & Co., 35 West 32nd Street, New York,** who will be pleased to submit samples of their products for clinical test. They also furnish physicians very handy pads with instructions for patients suffering from gonorrhoea which are very complete, though being brief, and contain no advertising matter.

Write to them to-day and mention THE MEDICAL COUNCIL

cilities for increased supply of Welch Grape Juice.

The growth of the Welch Grape Juice Co. has been remarkable. It has in a few years reached very large proportions. Of course, this is a result of the superior quality of Welch Grape Juice, and we predict continued growth as long as the product is kept up to the present standard. No physician need fear any untoward results for his patient from the use of Welch Grape Juice. It does not contain any preservative or other deleterious substance. Prescribe it freely without fear.

Put all your eggs in one basket, and then place the basket in cold storage.—*Life.*

Nephritis.

Watch the urine in infectious diseases and take every precaution against nephritis. This is effectively done by using Cystogen. Cystogen gives off formaldehyde and other antiseptic agents at bodily temperature. It has been extensively and successfully prescribed for more than fifteen years.

Cystogen Lithia (cystogen and lithia) tablets are a convenient and effective form of administration. One in a glass of water makes a proper dose, at meal times or between meals.

Samples and literature will be sent you free, if THE COUNCIL is mentioned. Address Cystogen Chemical Company, 515 Olive street, St. Louis, Mo.

Sydenham says: "Bark is no surer a cure for ague than riding for phthisis."

(*Continued one leaf over*)

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Alcohol as a Stimulant

"Upon the heart and circulation, the first effects of alcohol are those of slight and brief stimulation by reflex action. After its absorption the same effects are exhibited in a more marked degree. The pulse becomes fuller, the action of the heart is quickened and its force increased, due mainly to direct stimulation of its accelerator nerves. The vaso-motor system is inhibited, causing dilatation of all the vessels of the body, especially of those of the periphery and producing a sense of increased body heat. The blood pressure is raised, the great increase of cardiac action overcoming the results of the vascular dilatation."—Samuel O. L. Potter in "Therapeutics, Materia Medica and Pharmacy," edition of 1910, page 107; cf. New England Medical Monthly, July 1911, page 261.,

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JAMES E. PEPPER whisky is bottled in bond when six years old, in the United States Bonded Warehouse, directly under government supervision.

United States Government Stamp affixed across the cork of every bottle of genuine **JAMES E. PEPPER whisky** states age and proof strength. This is your guarantee of purity, quality and uniformity.

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$3,000 practice to the purchaser of my real estate. Modern home. Price, $4,000. $1,800 cash, balance terms to suit purchaser. Dr. F. B. Lauderbaugh, Addison, Pa.

THE LATEST issue of the "California Review" gives full particulars of the Panama-Pacific Exposition to be held in San Francisco. The first one hundred people answering this advertisement will receive sample copy free. 833 Phelan Bldg., San Francisco, Cal.

FOR SALE—Office outfit, eye records, and practice of eye, ear, nose and throat. Lucrative practice. Beautiful city. Address Dr. Rote, Williamsport, Pa.

FOR SALE—Good country practice. Purchaser can occupy house, partly furnished, have use of office outfit, driving outfit and telephones for $10 per month until April 1, with option of buying at that time. Address Dr. J. E. Taylor, Kennerdell, Pa., R. D. No. 1.

FOR SALE—A $3,000 practice in Colorado, for price of equipment. Failing health reason for selling. Address E. C., care Medical Council.

FOR SALE—$3,500 country practice in central Wisconsin. $1,400 cash (balance $600 easy terms) buys real estate and all fixtures for practice. Great opportunity. Address A. C. E., care Medical Council.

FOR SALE—Medical and Surgical Pocket Cases, electric instruments and batteries, operating table, instrument stand and table. Doctor just deceased. Price very low. Address Mr. W. C. Williamson, Clarinda, Iowa.

WANTED—In a railroad town in either Indiana, Kansas, Iowa or Nebraska—Indiana preferred—an unopposed practice of $2500 per year or better. Will buy property. Write full particulars in first letter. Address Lock Box 75, Howard City, Mich.

FOR SALE—Modern eight-room house, less than value, terms, Chicago suburb; practice free, saved $5000 in six years. Particulars on request. Address "Elmo," care Medical Council.

FOR SALE—$4000 unopposed general practice in Central Maine, for price of property. Real estate consists of 11-room house and stable. Modern improvements. Price, $2500; one-half down, balance on easy terms. Will give satisfactory introduction and can transfer entire practice. Address 999, care Medical Council.

Economic Local Anesthesia.

When using Ethyl Chloride for local anesthesia, it is economy to use the purest and best. By so doing you need less for the desired result. If you use Gebauer's Ethyl Chloride you have the purest and most efficient Ethyl Chloride obtainable, thus saving considerable. It is put up in *metal* tubes with patent valve, which does away with loss through breakage and waste, through poor valve. Be sure to get Gebauer's Ethyl Chloride by specifying it on your next order. Write for information, mentioning THE COUNCIL. Address Gebauer Chemical Company, 6950 Broadway, Cleveland, O.

Good Whisky.

Doctor, when prescribing an alcoholic stimulant, see that it is a good one, not some doped up fusel oil trash, most harmful to your patient. Insist upon the highest purity, like The Pepper Whisky. The James E. Pepper Whisky is the standard of purity. Write on your letter head or ℞ blank, and an order for a trial bottle (quart) will be sent you free, if THE COUNCIL in mentioned. Address the James E. Pepper Distilling Company, 604 Rector Building, Chicago, Ill.

A Support Meeting Anatomatical Requirements.

A supporter that exerts pressure or constriction at the wrong place, is not only a source of discomfort, but a positive detriment. The proper appliance, therefore, must meet anatomical requirements, and must be easy to keep clean. These advantages are exemplified in the Storm Abdominal Binder. Its use means comfort and proper support in enteroptosis, movable kidney, abdominal hernia, obesity, and as a post operative support; in fact, any condition in which an abdominal supporter or binder is indicated. The Storm Binder is the invention that took first prize offered by the Philadelphia Hospital. Send for literature, etc. Address Dr. K. L. Storm, 1612 Diamond street, Philadelphia, Pa., mentioning THE COUNCIL.

Hygiene and the Child

We heartily recommend to our readers the journal devoted to the interest of childhood, called *Hygiene and the Child.*

Free from every commercial taint, *Hygiene and the Child* is issued with the object of stimulating greater study of child hygiene. The field is so important that work in this direction must prove helpful and, at the very least, in increasing further interest in the hygienic welfare of infants and children.

The October, 1911, number is a symposium on Tuberculosis, dealing with the question very carefully and thoroughly. It shows what is being accomplished in treatment, with special reference to childhood. Hygienic measures are given the first rank, and the numerous well-illustrated reports prove the great importance of these measures.

We suggest that every physician should have a copy of this issue and study it carefully. We are heartily in accord with the work being done, and earnestly advise our readers to send for a copy.

Write to the publisher, Henri Nestle, 99 Chambers Street, New York City, mentioning the COUNCIL, and a copy will be sent you free.

Mr. Nestle is the maker of Nestle's Infant Food, and his great interest in Childhood has resulted in much philanthropic work for the benefit of Infants and Children. We commend his work.

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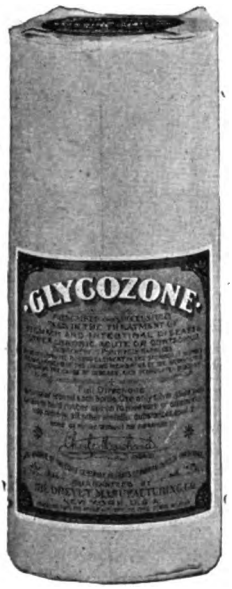

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ABSOLUTELY NON-POISONOUS

Used both internally and externally.

Administered internally for

CHRONIC DYSPEPSIA GASTRIC ULCER, ACUTE and CHRONIC INFLAMMATORY AFFECTIONS of the ALIMENTARY TRACT.

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is especially valuable when there is torpidity of the bowels or intestinal sluggishness arising from organic derangement of the liver and kidneys. It is the best agent for the relief of that form of costiveness that is ushered in by an attack of colic and indigestion, and not only clears away the effete and irritating matter in the alimentary tract but eliminates the semi-inspissated bile that too frequently induces the so-called "bilious" condition; at the same time an abundant secretion of normal bile is assured, thereby demonstrating its value as a liver stimulant and true cholagogue.

Write for free sample.

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THE PHYSICIANS' ORIGINAL LETTERS, from which the following abstracts were taken, have been exhibited to the publishers of *The American Journal of Surgery, American Medicine, Medical Council, Medical World, Medical Summary* and *The New York Medical Journal.* The submission of these unsolicited letters to a competent jury of publishers establishes their authenticity without misusing their confidential nature. All of the products they used were purchased by them of their own volition. In buying a new supply, with their own *cash,* of their own free will and accord, these practising physicians made use of these statements of results accomplished. This is an exhibit of clean, reliable evidence:

"A-f-sal has eliminated entirely from his system, in three weeks' time, the most stubborn form of rheumatic synovitis. He had previously suffered for five months and had been attended by several of Philadelphia's most eminent physicians (all of them professors of the University of Pennsylvania and of Jefferson Medical College) without even the slightest relief."—*A Pennsylvania Physician.*

"I began the use of a-f-sal in a rheumatic case and it seemed to work so well at that time that the patient made a rapid improvement. Please send me eight ounces more of the five-grain tablets whichever way will bring it to me the quickest."—*An Ohio Physician.*

"After suffering three weeks with lumbago I took 20 grains of a-f-sal four times a day. Was better second day; cured (at least for present) in about four days."—*A Pennsylvania Physician.*

"I have used four ounces of a-f-sal with gratifying results in articular rheumatism and if there is a disease on earth where we do not expect gratifying results, it is in articular rheumatism."—*A Kansas Physician.*

"Enclosed find money order for which send me 12 ounces more of a-f-sal. Am using it in the case of a woman 58 years, weight 190. Has been troubled for three years with rheumatism in knees, something like gout, with considerable deposits of biurate of soda. Patient has been to all the resorts without relief. After being on a-f-sal ten days patient is feeling better. Says she cannot walk any better, but walks with less pain and trouble.

"Tried a-f-sal on a case of acute articular rheumatism with beautiful results, 30 grains every hour. Eight doses gave complete relief. Patient is now taking it in 30 grain t. i. d. as a prophylactic."—*An Ohio Physician.*

"I have a patient, lady, 64 years, who has been crippled with rheumatism, hardly able to feed herself, and not able to walk without assistance. Had tried different treatments with several different physicians, without relief. About four weeks ago I put her on 20-grain doses, five times a day, of a-f-sal—with the happiest results. She is now able to get up and down and walk without any aid at all. The improvement has been marked and steady from the first week of treatment. I enclose money order for more and ask you to send it to me, at your earliest convenience."—*An Ohio Physician.*

"I find a-f-sal very useful in chronic rheumatism. Of its value in muscular rheumatism I am convinced. Enclosed find check for $15.00 for 20 ounces in five-grain tablets, and the remainder in 10-gram capsules."—*A Pennsylvania Physician.*

"In re my rheumatic synovitis I took 15 grains three times a day for about a week and have had absolutely no pain in the joint since the fourth or fifth day. (Better results had he taken six doses a day.) I am sending some to my mother in Europe, for gout in her fingers. I have instructed my druggist to lay in a supply."—*A Pennsylvania Physician.*

"Hurry enclosed order for a-f-sal. I find it to be the remedy that has most helped my mother, who has had rheumatism for 17 years."—*A Pennsylvania Physician.*

"I am using a-f-sal with results of quite marked improvement in a case of chronic rheumatic gout. It seems to be especially valuable in allaying the irritability of the urinary organs."—*A Pennsylvania Physician.*

"Have had excellent results in some bladder cases with a-f-sal. I am anxious to have more on hand and will greatly appreciate a prompt reply as to whether you will sell to physicians."—*A Pennsylvania Physician.*

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"I find a-f-sal's greatest value, after using 36 ounces, is as a urinary antiseptic, especially in chronic cases of gonorrhea, and obstinate cases of cystitis."—*A Texas Physician.*

"During my last term of service at . . . Hospital I gave my typhoid fever cases ten grains a-s-phen every three hours without any cardiac depression, but on the contrary the pulse becoming slower, fuller and sounder. It invariably held the temperature in control—rarely going above 103.5 degrees F., and then only in exceptionally late cases. In all of my cases, except one, the mental symptoms, if present, were exceptionally mild. I have not seen any cyanosis during its administration. From my experience with a-s-phen I am satisfied that in it we have a safe remedy which will very markedly reduce the toxæmia of typhoid fever."—*A Philadelphia Physician.*

"I have been unable to note any change in my wife's condition (a multiple neuritis of rheumatic origin is my diagnosis) until the past three weeks, during which time she has been slowly improving. She has been taking a-s-phen tablets and please send me a pound of it. I believe a-s-phen is as good a remedy as has been yet discovered."—*An Iowa Physician.*

"I have known the case of Mr. . . . for over thirty years and am glad to learn that a-f-sal has lessened so markedly the size and stiffness of his finger joints, the effects of his chronic articular rheumatic condition.

"There are others ! I suffer personally in a lesser degree than Mr. . . . did, it is true, but quite enough to learn the efficiency of a-f-sal, for which I enclose money order for twelve ounces of five grain tablets."—*A New Jersey Physician.*

"In lessening the severity and continuance of the sufferings in one hundred cases of acute inflammatory rheumatism during the past twelve months, my experience has been much more favorable with a-f-sal than when I used the usual sodium salicylate and alkaline treatments expounded in the text-books of our highest authorities. While a-f-sal was ameliorating the cause of cardiac complication, there were no depressing effects upon the heart's action, and by the administration of thirty grains every hour prompt control of the inflammatory conditions resulted. The diarrhoea that sometimes accompanies its use in that dosage, was overcome with thirty grain doses of bismuth subgallate. As to its utility in muscular rheumatism, there is nothing that I know of that compares to it in value."—Doctor Zech, in the November *Medical Summary.*

"I have been suffering with rheumatic synovitis for eight years and since last June have taken about thirty-six ounces of a-f-sal. It has done me more good than all other remedies combined. I know had I not continued to take it, I would be unable to attend to my practice, which I now do with ease. I am very much encouraged. Enclosed find money order for which send me another twelve ounces of a-f-sal."—*A Pennsylvania Physician.*

"With eight ounces of a-f-sal I have just cured a case of muscular rheumatism in a man aged 52 years who has been suffering for nine years. Last winter he was confined to the house for three weeks."—*A Wisconsin Physician.*

A-f-sal, A-s-phen, Iodomuth and Guaialin are true chemical compounds. They can be definitely identified by specific test. The arrangement of their molecules gives to them curative efficiency with safety. Their comparative freedom of poisonous nature permits the use of sufficient dose of the curative properties that enables them to yield better results than the competing products of the Pharmacopoeia. The good results, accomplished from their proper use, establishes for them a standard of value that compares favorably with the world's best therapeutic agents.

We cannot guarantee correctness of diagnosis. We do guarantee, to those physicians who will pay the costs of transportation, to return the money for all unopened containers sent back to us by those who are not satisfied with our chemicals purchased through our special introductory offer.

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How about *you*—Doctor? Are you among the sixty thousand progressives who are already using the active principles—in the handy, ready-to-dispense form in which we supply them? Or are you still using the crudities of yesterday?

If so, we urge you to investigate the alkaloidal way. Give yourself and your patients *right now* the benefits that come from using these fine-edge tools. Get results where before you have been meeting with failures, just because you have persisted in sticking to the antiquated tools—the tincture and other uncertain fluids.

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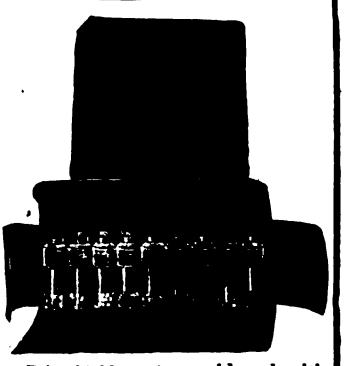

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When a Nursing Baby Fails to Gain

but gradually declines and loses weight, it is always wise to save valuable time by placing the infant at once on a nutritious, perfectly balanced food that can be closely adjusted to its digestive capacity and nutritional needs.

Nestlé's Food

is particularly useful in these cases of "failing nutrition," not only because of its adequate proportions of proteids, fats and carbohydrates and consequent high nutritive value, but because of the stimulating effect it rarely fails to exert on the baby's whole metabolism.

Thus it is that weak, run-down infants show such prompt and substantial gain in weight, vitality and strength following the administration of this dependable nutrient.

For nearly forty years **Nestle's Food** has been serving the medical profession, and today countless physicians prefer it to all other foods, because of its broad utility, freedom from contamination, ready adaptation, and easy preparation for immediate use. In brief, **Nestle's Food** *solves the difficult problems of infant feeding*—and makes weak babies healthy and strong.

Samples on request.

HENRI NESTLÉ,
99 Chambers Street, New York City

MIGRAINE

Recent study has shown that a large proportion of the periodic or chronic headaches from which so many suffer, can be traced to malnutrition and devitalization of the cerebral cells.

This accounts for the notable efficiency of

Celerina

in hemicrania, and all forms of the so-called idiopathic headaches. Used systematically, this valuable nerve tonic promotes a rapid and substantial increase of vitality throughout the nervous system, but especially in the higher centers. It relaxes nerve tension, regulates the local blood supply, improves the nutrition of nerve tissue and thus restores normal functional activity. Under its administration pain gradually disappears, the resistance of the nervous system is increased and the most distressing headaches are often completely and permanently relieved.

For further information address:

THE RIO CHEMICAL CO.
79 Barrow Street, New York

CLINTON
CASCARA ACTIVE

FOR CHRONIC CONSTIPATION

DOES NOT GRIPE

A palatable and highly active preparation of CASCARA SAGRADA.

Each fluidounce imperial represents one avoirdupois ounce of selected drug.

Sure and Safe Laxative for Children and Adults.

WRITE FOR FREE SAMPLE.

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[CREOSOTE PHENYL-PROPIONATE]

Proposote

For Treatment of Chronic Bronchitis, Tuberculosis, etc.

Proposote is creosote phenyl-propionate—creosote combined with phenyl-propionic acid—a true chemical combination, equivalent (approximately) to 50 per cent. creosote. Its uses are the same as those for which creosote has long enjoyed a noteworthy reputation.

Proposote has this important advantage: being insoluble in acid media, it passes through the stomach unaltered by the gastric juice, to be slowly broken up by the alkaline fluids of the small intestine, and may be given in gradually increasing doses until the desired effect is obtained. Prolonged clinical tests show that the distressing eructations attending the administration of creosote do not occur when **Proposote** is given for even a protracted period and in full doses.

Elastic gelatin globules (10 minims), boxes of 25 and 100.

WRITE FOR DESCRIPTIVE PAMPHLET.

[SANTALYL STEARATE]

Stearosan

Santal Oil in New and Improved Form.

Stearosan is santalyl stearate—santalol combined with stearic acid—a true chemical compound, equivalent to about 50 per cent. of santal oil.

It is indicated in chronic catarrhs of mucous membranes, notably in gonorrhea, cystitis, urethritis, vaginitis, and in pulmonary disorders, such as chronic bronchitis and bronchorrea.

Stearosan possesses therapeutic properties similar to those of santal oil. Moreover, it is not attacked by the acid gastric juice, but passes into the small intestine, where it is broken up or emulsified by the alkaline fluid and absorbed without difficulty. Being non-irritating to the gastric mucosa, it may be administered in increasing doses until the desired effect is obtained.

Elastic gelatin globules (10 minims), boxes of 25 and 100.

LITERATURE FREE ON REQUEST.

PARKE, DAVIS & COMPANY

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